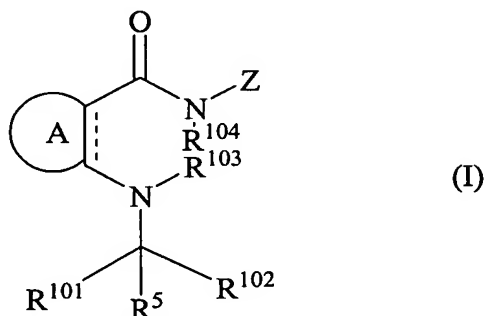


IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Original): A compound represented by formula (I) or a pharmaceutically acceptable salt or solvate thereof:



wherein

A represents a five- to nine-membered unsaturated carbocyclic moiety or a five- to nine-membered unsaturated heterocyclic moiety, and ---- represents a single bond or a double bond,

the carbocyclic moiety and heterocyclic moiety represented by A are optionally substituted by

- (a) a halogen atom;
- (b) hydroxyl;
- (c) C<sub>1-6</sub> alkyl;
- (d) C<sub>1-6</sub> alkoxy;
- (e) aryl;
- (f) aryloxy;
- (g) arylthio;
- (h) alkylthio;
- (i) nitro;
- (j) amino;

- (k) mono- or di-aryl-amino;
- (l) mono- or di-<sub>1-6</sub> alkyl-amino;
- (m) C<sub>2-6</sub> alkenyl;
- (n) C<sub>2-6</sub> alkenyloxy;
- (o) C<sub>2-6</sub> alkenylthio;
- (p) mono- or di-C<sub>2-5</sub> alkenyl-amino;
- (q) carboxyl; or
- (r) C<sub>1-6</sub> alkyl- or aryl-oxycarbonyl;

(c) the C<sub>1-6</sub> alkyl group, (d) the C<sub>1-6</sub> alkoxy group, (e) the aryl group, (f) the aryloxy group, (g) the arylthio group, (h) the alkylthio group, (m) the C<sub>2-6</sub> alkenyl group, (n) the C<sub>2-6</sub> alkenyloxy group, and (o) the C<sub>2-6</sub> alkenylthio group are optionally substituted by (1) hydroxyl, (2) thiol, (3) amino, (4) C<sub>1-6</sub> alkoxy, (5) C<sub>1-6</sub> alkylthio, (6) C<sub>1-6</sub> alkylsulfonyl, (7) mono- or di-C<sub>1-6</sub> alkyl-amino in which the di-C<sub>1-6</sub> alkyl-amino group may form cyclic amino optionally containing 1 to 3 heteroatoms, (8) aryloxy, (9) arylthio, (10) arylsulfonyl, (11) aryl, (12) a heterocyclic group, (13) a halogen atom, (14) aryl-amino in which the amino group is optionally substituted by C<sub>1-6</sub> alkyl, and the aryl group is optionally substituted by halogen, C<sub>1-6</sub> alkyl, C<sub>1-6</sub> alkoxy, or C<sub>1-6</sub> alkyl-amino, (15) C<sub>1-6</sub> alkoxy-(CH<sub>2</sub>CH<sub>2</sub>)<sub>m</sub> wherein m is an integer of 1 to 6, (16) carboxyl, (17) an oxygen atom (=O), or (18) C<sub>3-7</sub> cycloalkyl,

the aryl moiety in (k) the mono- or di-aryl-amino group is optionally substituted by (1) hydroxyl, (2) thiol, (3) amino, (4) C<sub>1-6</sub> alkoxy, (5) C<sub>1-6</sub> alkylthio, (6) C<sub>1-6</sub> alkylsulfonyl, (7) mono- or di-C<sub>1-6</sub> alkyl-amino in which the di-C<sub>1-6</sub> alkyl-amino group may form cyclic amino optionally containing 1 to 3 heteroatoms, (8) aryloxy, (9) arylthio, (10) arylsulfonyl, (11) aryl, (12) a heterocyclic group, (13) a halogen atom, (14) aryl-amino in which the amino group is optionally substituted by C<sub>1-6</sub> alkyl, and the aryl group is optionally substituted by halogen, C<sub>1-6</sub> alkyl, C<sub>1-6</sub> alkoxy, or C<sub>1-6</sub> alkyl-amino, (15) C<sub>1-6</sub> alkoxy-(CH<sub>2</sub>CH<sub>2</sub>O)<sub>m</sub> wherein

m is an integer of 1 to 6, (16) carboxyl, (17) an oxygen atom (=O), or (18) C<sub>3-7</sub> cycloalkyl, and, in the case of the mono-arylamino group, the amino group is optionally substituted by C<sub>1-6</sub> alkyl optionally substituted by hydroxyl or a halogen atom,

in (l) the mono- or di-C<sub>1-6</sub> alkylamino, the di-C<sub>1-6</sub> alkyl group may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by a halogen atom; C<sub>1-6</sub>, alkyl optionally substituted by hydroxyl, a halogen atom, or aryl optionally substituted by a halogen atom, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkyloxy, a heterocyclic group optionally substituted by a halogen atom, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkyloxy, and, when one or two alkyl groups on the amino group and the cyclic amino moiety are substituted by two C<sub>1-6</sub> alkyl groups, they together may form C<sub>3-7</sub> cycloalkyl; C<sub>1-6</sub> alkoxy; C<sub>1-6</sub> alkylthio; mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two C<sub>1-6</sub> alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by hydroxyl or a halogen atom; arylamino in which the amino group is optionally substituted by C<sub>1-6</sub> alkyl; mono- or di-C<sub>1-6</sub> alkylcarbamoylmethyl in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by hydroxyl; aryloxy; arylthio; an oxygen atom (=O); hydroxyl; carboxyl; C<sub>1-6</sub> alkoxy- or aryloxy-carbonyl; C<sub>1-6</sub> alkylcarbonyl; aryl optionally substituted by a halogen atom or hydroxyl; or a heterocyclic group,

in (p) the mono- or di-C<sub>2-6</sub> alkenylamino group, the amino group of the monoalkenylamino group is optionally substituted by C<sub>1-6</sub> alkyl optionally substituted by hydroxyl or a halogen atom, and the di-C<sub>2-6</sub> alkenyl together may form unsaturated cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkenyl groups on the amino group or the unsaturated cyclic amino moiety are optionally substituted by a halogen atom;

C<sub>1-6</sub> alkyl optionally substituted by hydroxyl, a halogen atom, aryl optionally substituted by a halogen atom, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkoxy, a heterocyclic group optionally substituted by a halogen atom, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkoxy, and, when one or two alkyl groups on the amino group and the cyclic amino moiety are substituted by two C<sub>1-6</sub> alkyl groups, they together may form C<sub>3-7</sub> cycloalkyl; C<sub>1-6</sub> alkoxy; C<sub>1-6</sub> alkylthio; mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two C<sub>1-6</sub> alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by hydroxyl or a halogen atom; arylamino in which the amino group is optionally substituted by C<sub>1-6</sub> alkyl; mono- or di-C<sub>1-6</sub> alkylcarbamoylmethyl in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by hydroxyl; aryloxy; arylthio; an oxygen atom (=O); hydroxyl; carboxyl; C<sub>1-6</sub> alkoxy- or aryloxy-carbonyl; C<sub>1-6</sub> alkylcarbonyl; aryl optionally substituted by a halogen atom or hydroxyl; or a heterocyclic group,

when the carbocyclic moiety and heterocyclic moiety represented by A are substituted by two (c) C<sub>1-6</sub> alkyl groups or (m) C<sub>2-5</sub> alkenyl groups, the alkyl or alkenyl groups together with the carbon atoms to which they are respectively attached may form an unsaturated five- to seven-membered carbocyclic ring,

R<sup>5</sup> represents C<sub>1-6</sub> alkyl, aryl, C<sub>1-6</sub> alkoxy, aryloxy, C<sub>1-6</sub> alkylamino, arylamino, C<sub>1-6</sub> alkylthio, arylthio, C<sub>3-7</sub> cycloalkyl, or a heterocyclic group, and the C<sub>1-6</sub> alkyl, aryl, C<sub>1-6</sub> alkoxy, aryloxy C<sub>1-6</sub> alkylamino, arylamino, C<sub>1-6</sub> alkylthio, arylthio, C<sub>3-7</sub> cycloalkyl, or heterocyclic group represented by R<sup>5</sup> may be the same or different, and is optionally substituted by

(I) a halogen atom;

(II) C<sub>1-6</sub> alkyl optionally containing a substituent selected from the group consisting of (1) hydroxyl, (2) thiol, (3) amino, (4) C<sub>1-6</sub> alkoxy, (5) C<sub>1-6</sub> alkylthio, (6) C<sub>1-6</sub> alkylsulfinyl, (7) C<sub>1-6</sub> alkylsulfonyl, (8) mono- or di C<sub>1-6</sub> alkylamino, (8') amino substituted by a heterocyclic group optionally substituted by C<sub>1-6</sub> alkyl, (9) C<sub>1-6</sub> alkylcarbonyloxy, (10) C<sub>1-6</sub> alkylcarbonylthio, (11) C<sub>1-6</sub> alkylcarbonylamino, (12) aryloxy, (13) arylthio, (14) arylsulfinyl, (15) arylsulfonyl, (16) arylamino, (17) C<sub>1-6</sub> alkyl- or aryl-sulfonylamino, (18) C<sub>1-6</sub> alkyl- or aryl-ureido, (19) C<sub>1-6</sub> alkoxy- or aryloxy-carbonylamino, (20) C<sub>1-5</sub> alkylamino- or arylamino-carbonyloxy, (21) carboxyl, (22) nitro, (23) a heterocyclic group, (23') Het-S(=O)<sub>j</sub>-wherein Het represents a heterocyclic group, j is 0, 1, or 2, and Het is optionally substituted by alkyl optionally substituted by mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms and one or two alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by hydroxyl, (24) cyano, and (25) a halogen atom, wherein the alkyl moiety in (4) the C<sub>1-6</sub> alkoxy group, (5) the C<sub>1-6</sub> alkylthio group, (6) the C<sub>1-6</sub> alkylsulfinyl group, and (7) the C<sub>1-6</sub> alkylsulfonyl group is optionally substituted by a halogen atom; C<sub>1-6</sub> alkyl; C<sub>1-6</sub> alkoxy; C<sub>1-6</sub> alkylthio; mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms; aryloxy; arylthio; hydroxyl; carboxyl; -S(=O)<sub>2</sub>(-OH); C<sub>1-6</sub> alkoxy- or aryloxy-carbonyl; C<sub>1-6</sub> alkylcarbonyl; aryl; or a heterocyclic group optionally substituted by alkyl optionally substituted by mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkyl groups on the amino group and cyclic amino moiety are optionally substituted by hydroxy, and

in (8) the mono- or di-C<sub>1-6</sub> alkylamino group, the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by a halogen atom; C<sub>1-6</sub>

Docket No.: 278868US0PCT  
Preliminary Amendment

alkyl optionally substituted by hydroxyl, a halogen atom, aryl optionally substituted by a halogen atom, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkyloxy, or a heterocyclic group optionally substituted by a halogen atom, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkyloxy, and, when one or two alkyl groups on the amino group and the cyclic amino moiety are substituted by two C<sub>1-6</sub> alkyl groups, they together may form C<sub>3-7</sub> cycloalkyl; C<sub>1-6</sub> alkoxy; C<sub>1-6</sub> alkylthio; mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by hydroxyl; arylamino in which the amino group is optionally substituted by C<sub>1-6</sub> alkyl; mono- or di-C<sub>1-6</sub> alkylcarbamoylmethyl in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by hydroxyl; aryloxy; arylthio; an oxygen atom (=O); hydroxyl; carboxyl; C<sub>1-6</sub> alkoxy- or aryloxy-carbonyl; C<sub>1-6</sub> alkylcarbonyl; aryl optionally substituted by a halogen atom or hydroxyl; or a heterocyclic group, and, when one carbon atom in the cyclic amino moiety is substituted by two C<sub>1-6</sub> alkoxy groups which may be the same or different, the two alkoxy groups together may form group -O-(CH<sub>2</sub>)<sub>p</sub>-O- wherein p is an integer of 2 to 4, and the cyclic amino group may condense with a monocyclic or bicyclic aromatic carbocyclic ring or a monocyclic or bicyclic aromatic heterocyclic ring to represent a bicyclic or tricyclic heterocyclic group;

(III) C<sub>1-6</sub> alkoxy optionally substituted by a halogen atom;

(IV) C<sub>1-6</sub> alkylthio optionally substituted by a halogen atom;

(V) C<sub>3-7</sub> cycloalkyl;

(VI) aryl;

(VII) aryloxy;

(VIII) C<sub>1-6</sub> alkylcarbonylamino;

(VIX) C<sub>1-6</sub>, alkylcarbonyloxy;

(X) hydroxyl;

(XI) nitro;

(XII) cyano;

(XIII) amino;

(XIV) mono or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms;

(XV) arylamino;

(XVI) C<sub>1-6</sub> alkyl- or aryl-sulfonylamino;

(XVII) C<sub>1-6</sub> alkyl- or aryl-ureido;

(XVIII) C<sub>1-6</sub> alkoxy- or aryloxy-carbonylamino;

(XIX) C<sub>1-6</sub> alkylamino- or arylamino-carbonyloxy;

(XX) C<sub>1-6</sub> alkoxy- or aryloxy-carbonyl;

(XXI) acyl;

(XXII) carboxyl;

(XXIII) carbamoyl;

(XXIV) mono- or di-alkylcarbamoyl;

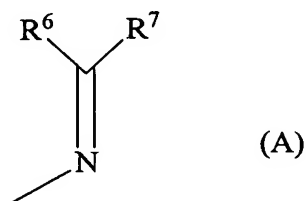
(XXV) a heterocyclic group;

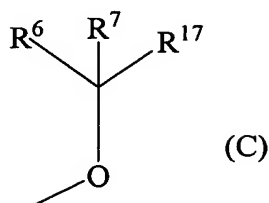
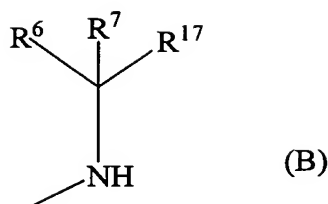
(XXVI) alkyl- or aryl-sulfonyl;

(XXVII) C<sub>2-6</sub>, alkenyloxy group; or

(XXVIII) C<sub>2-6</sub> alkenyloxy,

Z represents group (A), group (B), or group (C):





wherein

$R^6$  and  $R^7$ , which may be the same or different, represent a hydrogen atom,  $C_{1-6}$  alkyl,  $C_{2-6}$  alkenyl,  $C_{2-6}$  alkenyl, aryl, aryl  $C_{1-6}$  alkyl, aryl  $C_{2-5}$  alkenyl, or a heterocyclic group, and the  $C_{1-6}$  alkyl, aryl, aryl  $C_{1-6}$  alkyl, aryl  $C_{2-6}$  alkenyl, and heterocyclic groups, which may be the same or different, are optionally substituted by.

(I) a halogen atom;

(II)  $C_{1-6}$  alkyl optionally having a substituent selected from a group consisting of (1) hydroxyl, (2) thiol, (3) amino, (4)  $C_{1-6}$  alkoxy, (5)  $C_{1-6}$  alkylthio optionally substituted by hydroxyl, (6)  $C_{1-6}$  alkylsulfinyl, (7)  $C_{1-6}$  alkylsulfonyl, (8) mono- or di- $C_{1-6}$  alkylamino in which the di- $C_{1-6}$  alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, (9)  $C_{1-6}$  alkylcarbonyloxy, (10)  $C_{1-6}$  alkylcarbonylthio, (11)  $C_{1-6}$  alkylcarbonylamino, (12) aryloxy, (13) arylthio, (14) arylsulfinyl, (15) arylsulfonyl, (16) arylamino, (17)  $C_{1-8}$  alkyl- or aryl-sulfonylamino, (18)  $C_{1-6}$  alkyl- or aryl-ureido, (19)  $C_{1-6}$  alkoxy- or aryloxy-carbonylamino, (20)  $C_{1-6}$  alkylamino- or arylamino-carbonyloxy, (21) carboxyl, (22) nitro, (23) a heterocyclic group, (23') Het-S- wherein Het represents a heterocyclic group, (24) cyano, (25) a halogen atom, and (26)  $C_{1-6}$  alkyl- or aryl-oxycarbonyl;

(III)  $C_{1-6}$  alkoxy optionally having a substituent selected from the group consisting of (1) hydroxyl, (2) thiol, (3) amino, (4)  $C_{1-6}$  alkoxy, (5)  $C_{1-6}$  alkylthio optionally substituted by hydroxyl, (6)  $C_{1-6}$  alkylsulfinyl, (7)  $C_{1-6}$  alkylsulfonyl, (8) mono- or di- $C_{1-6}$  alkylamino in



which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, (9) C<sub>1-6</sub> alkylcarbonyloxy, (10) C<sub>1-6</sub> alkylcarbonylthio, (11) C<sub>1-6</sub> alkylcarbonylamino, (12) aryloxy, (13) arylthio, (14) arylsulfinyl, (15) arylsulfonyl, (16) arylamino, (17) C<sub>1-6</sub> alkyl- or aryl-sulfonylamino, (18) C<sub>1-8</sub> alkyl- or aryl-ureido, (19) C<sub>1-6</sub> alkoxy- or aryloxy-carbonylamino, (20) C<sub>1-6</sub> alkylamino- or arylamino-carbonyloxy, (21) carboxyl, (22) nitro, (23) a heterocyclic group, (23') Het-S- wherein Het represents a heterocyclic group, (24) cyano, (25) a halogen atom, and (26) C<sub>1-6</sub> alkyl-or aryl-oxycarbonyl;

(IV) C<sub>1-6</sub> alkylthio optionally substituted by a halogen atom;

(V) C<sub>3-7</sub> cycloalkyl;

(VI) aryl;

(VII) aryloxy;

(VIII) C<sub>1-6</sub> alkylcarbonylamino;

(VIX) C<sub>1-6</sub> alkylcarbonyloxy;

(X) hydroxyl;

(XI) nitro;

(XII) cyano;

(XIII) amino;

(XIV) mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino may form cyclic amino optionally containing 1 to 3 heteroatoms;

(XV) arylamino;

(XVI) C<sub>1-6</sub> alkyl- or aryl-sulfonylamino;

(XVII) C<sub>1-6</sub> alkyl- or aryl-ureido;

(XVIII) C<sub>1-6</sub> alkoxy- or aryloxy-carbonylamino;

(XIX) C<sub>1-6</sub> alkylamino- or arylamino-carbonyloxy;

(XX) C<sub>1-6</sub> alkoxy- or aryloxy-carbonyl;

- (XXI) aryl;
- (XXII) carboxyl;
- (XXIII) carbamoyl;
- (XXIV) mono- or di-alkylcarbamoyl;
- (XXV) a heterocyclic group;
- (XXVI) alkyl- or aryl-sulfonyl;
- (XXVII) C<sub>2-6</sub> alkenyloxy; or
- (XXVIII) C<sub>2-6</sub> alkynyloxy,
- R<sup>17</sup> represents a hydrogen atom,
- R<sup>101</sup> and R<sup>102</sup> together represent =O, and R<sup>103</sup> and R<sup>104</sup> represent a hydrogen atom, or
- R<sup>101</sup> and R<sup>104</sup> together represent a bond, and R<sup>102</sup> and R<sup>103</sup> together represent a bond.

Claim 2 (Original): The compound according to claim 1, wherein A represents a five- to nine-membered unsaturated carbocyclic moiety or a five- to nine,-membered unsaturated heterocyclic moiety, and ---- represents a double bond,

the carbocyclic moiety and heterocyclic moiety represented by A are optionally substituted by

- (a) a halogen atom;
- (b) hydroxyl;
- (c) C<sub>1-5</sub> alkyl;
- (d) C<sub>1-5</sub> alkoxy;
- (e) aryl;
- (f) aryloxy;
- (g) arylthio;
- (h) alkylthio;

(i) nitro; or

(j) amino,

(c) the C<sub>1-6</sub> alkyl group, (d) the C<sub>1-5</sub> alkoxy group, (e) the aryl group, (f) the aryloxy group, (g) the arylthio group, and (h) the alkylthio group are optionally substituted by (1) hydroxyl, (2) thiol, (3) amino, (4) C<sub>1-6</sub> alkoxy, (5) C<sub>1-6</sub> alkylthio, (6) C<sub>1-6</sub> alkylsulfonyl, (7) mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, (8) aryloxy, (9) arylthio, (10) arylsulfonyl, (11) aryl, (12) a heterocyclic group, (13) a halogen atom, or (14) arylamino in which the amino group is optionally substituted by C<sub>1-6</sub> alkyl, and the aryl group is optionally substituted by a halogen atom, C<sub>1-6</sub> alkyl, C<sub>1-6</sub> alkoxy, or C<sub>1-6</sub> alkylamino,

when the carbocyclic moiety and the heterocyclic moiety are substituted by two (c) C<sub>1-6</sub> alkyl groups, they together may form a C<sub>3-5</sub> alkylene chain,

R<sup>5</sup> represents C<sub>1-6</sub> alkyl, aryl, C<sub>1-6</sub> alkoxy, aryloxy, C<sub>1-6</sub> alkylamino, arylamino, C<sub>1-6</sub> alkylthio, arylthio, C<sub>3-7</sub> cycloalkyl, or a heterocyclic group, and the C<sub>1-6</sub> alkyl, aryl, C<sub>1-6</sub> alkoxy, aryloxy, C<sub>1-6</sub> alkylamino, arylamino, C<sub>1-6</sub> alkylthio, arylthio, C<sub>3-7</sub> cycloalkyl, or heterocyclic group represented by R<sup>5</sup> may be the same or different, and is optionally substituted by

(I) a halogen atom;

(II) C<sub>1-6</sub> alkyl optionally containing a substituent selected from the group consisting of (1) hydroxyl, (2) thiol, (3) amino, (4) C<sub>1-6</sub> alkoxy, (5) C<sub>1-6</sub> alkylthio, (6) C<sub>1-6</sub> alkylsulfinyl, (7) C<sub>1-6</sub> alkylsulfonyl, (8) mono- or di C<sub>1-6</sub> alkylamino, (8') amino substituted by a heterocyclic group optionally substituted by C<sub>1-6</sub> alkyl, (9) C<sub>1-6</sub> alkylcarbonyloxy (10) C<sub>1-6</sub> alkylcarbonylthio, (11) C<sub>1-6</sub> alkylcarbonylamino, (12) aryloxy, (13) arylthio, (14) arylsulfinyl, (15) arylsulfonyl, (16) arylamino, (17) C<sub>1-6</sub> alkyl- or aryl-sulfonylamino, (18) C<sub>1-6</sub>, alkyl- or aryl-ureido, (19) C<sub>1-6</sub> alkoxy- or aryloxy-carbonylamino, (20) C<sub>1-6</sub> alkylamino- or arylamino-

carbonyloxy, (21) carboxyl, (22) nitro, (23) a heterocyclic group, (23') Het-S(=O)<sub>j</sub>-wherein Het represents a heterocyclic group, j is 0, 1, or 2, and Het is optionally substituted by alkyl optionally substituted by mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms and one or two alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by hydroxyl, (24) cyano, and (25) a halogen atom,

wherein the alkyl moiety in (4) the C<sub>1-6</sub> alkoxy group, (5) the C<sub>1-6</sub> alkylthio group, (6) the C<sub>1-6</sub> alkylsulfinyl group, and (7) the C<sub>1-6</sub> alkylsulfonyl group is optionally substituted by a halogen atom; C<sub>1-6</sub> alkyl; C<sub>1-6</sub> alkoxy; C<sub>1-6</sub> alkylthio; mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms; aryloxy; arylthio; hydroxyl; carboxyl; -S(=O)<sub>2</sub>(-OH); C<sub>1-6</sub> alkoxy- or aryloxy-carbonyl; C<sub>1-6</sub> alkylcarbonyl; aryl; or a heterocyclic group optionally substituted by alkyl optionally substituted by mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by hydroxy, and

in (8) the mono- or di-C<sub>1-6</sub> alkylamino group, the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by a halogen atom; C<sub>1-6</sub> alkyl optionally substituted by hydroxyl; C<sub>1-6</sub> alkoxy; C<sub>1-6</sub> alkylthio; mono- or di-C<sub>1-6</sub> alkylamino in which one or two alkyl groups on the amino group are optionally substituted by hydroxyl; arylamino in which the amino group is optionally substituted by C<sub>1-6</sub> alkyl; mono- or di-C<sub>1-6</sub> alkylcarbonylmethyl in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by hydroxyl; aryloxy; arylthio; an oxygen atom (=O)- hydroxyl; carboxyl; C<sub>1-6</sub> alkoxy- or aryloxy-carbonyl; C<sub>1-6</sub>

alkylcarbonyl; aryl optionally substituted by a halogen atom or hydroxyl; or a heterocyclic group;

(III) C<sub>1-6</sub> alkoxy optionally substituted by a halogen atom;

(IV) C<sub>1-6</sub> alkylthio optionally substituted by a halogen atom;

(V) C<sub>3-7</sub> cycloalkyl;

(VI) aryl;

(VII) aryloxy;

(VIII) C<sub>1-6</sub> alkylcarbonylamino;

(VIX) C<sub>1-6</sub> alkylcarbonyloxy;

(X) hydroxyl;

(XI) nitro;

(XII) cyano;

(XIII) amino;

(XIV) mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms;

(XV) arylamino;

(XVI) C<sub>1-6</sub> alkyl- or aryl-sulfonylamino;

(XVII) C<sub>1-6</sub> alkyl- or aryl-ureido;

(XVIII) C<sub>1-6</sub> alkoxy- or aryloxy-carbonylamino;

(XIX) C<sub>1-6</sub> alkylamino- or arylamino-carbonyloxy;

(XX) C<sub>1-6</sub> alkoxy- or aryloxy-carbonyl;

(XXI) acyl;

(XXII) carboxyl;

(XXIII) carbamoyl;

(XXIV) mono- or di-alkylcarbamoyl;

(XXV) a heterocyclic group;

(XXVI) alkyl- or aryl-sulfonyl;

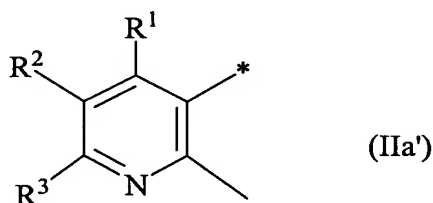
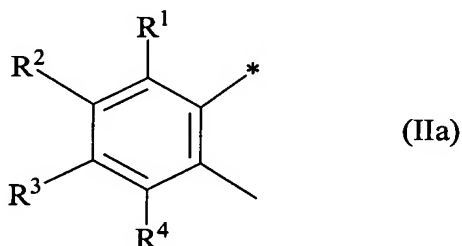
(XXVII) C<sub>2-6</sub> alkenyloxy; or

(XXVIII) C<sub>2-6</sub> alkenyloxy,

Z represents group A or group B wherein R<sup>6</sup>, R<sup>7</sup>, and R<sup>17</sup> are as defined in claim 1,

R<sup>101</sup> and R<sup>102</sup> together represent =O, and R<sup>103</sup> and R<sup>104</sup> represent a hydrogen atom, or  
R<sup>101</sup> and R<sup>104</sup> together represent a bond, and R<sup>102</sup> and R<sup>103</sup> together represent a bond.

Claim 3 (Currently Amended): The compound according to claim 1 [[or 2]], wherein  
A represents formula (IIa) or formula (IIa'):



wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, and R<sup>4</sup>, which may be the same or different, represent

(a) a halogen atom;

(b) hydroxyl;

(c) C<sub>1-6</sub> alkyl;

(d) C<sub>1-6</sub> alkoxy;

(e) aryl;

(f) aryloxy;

- (g) arylthio;
- (h) alkylthio;
- (i) nitro;
- (j) amino;
- (i) nitro,
- (j) amino;
- (k) mono- or di-arylamino;
- (l) mono- or di-C<sub>1-6</sub> alkylamino;
- (m) C<sub>2-6</sub> alkenyl;
- (n) C<sub>2-6</sub> alkenyloxy;
- (o) C<sub>2-6</sub> alkenylthio;
- (p) mono- or di-C<sub>2-6</sub> alkenylamino;
- (q) carboxyl;
- (r) C<sub>1-6</sub> alkyl- or aryl-oxycarbonyl; or
- (s) a hydrogen atom,

(c) the C<sub>1-6</sub> alkyl group, (d) the C<sub>1-6</sub> alkoxy group, (e) the aryl group, (f) the aryloxy group, (g) the arylthio group, (h) the alkylthio group, (m) the C<sub>2-6</sub> alkenyl group, (n) the C<sub>2-6</sub> alkenyloxy group, and (o) the C<sub>2-6</sub> alkenylthio group are optionally substituted by (1) hydroxyl, (2) thiol, (3) amino, (4) C<sub>1-6</sub> alkoxy, (5) C<sub>1-6</sub> alkylthio, (6) C<sub>1-6</sub> alkylsulfonyl, (7) mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, (8) aryloxy, (9) arylthio, (10) arylsulfonyl, (11) aryl, (12) a heterocyclic group, (13) a halogen atom, or (14) arylamino in which the amino group is optionally substituted by C<sub>1-6</sub> alkyl, and the aryl group is optionally substituted by halogen, C<sub>1-6</sub> alkyl, C<sub>1-6</sub> alkoxy, or C<sub>1-6</sub> alkylamino, (15) C<sub>1-6</sub> alkoxy-(CH<sub>2</sub>CH<sub>2</sub>O)<sub>m</sub> wherein m is an integer of 1 to 6, (16) carboxyl, (17) an oxygen atom (=O), or (18) C<sub>3-7</sub> cycloalkyl,

the aryl moiety in (k) the mono- or di-arylamino group is optionally substituted by (1) hydroxyl, (2) thiol, (3) amino, (4) C<sub>1-6</sub> alkoxy, (5) C<sub>1-6</sub> alkylthio, (6) C<sub>1-6</sub> alkylsulfonyl, (7) mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, (8) aryloxy, (9) arylthio, (10) arylsulfonyl, (11) aryl, (12) a heterocyclic group, (13) a halogen atom, (14) arylamino in which the amino group is optionally substituted by C<sub>1-6</sub> alkyl, and the aryl group is optionally substituted by a halogen atom, C<sub>1-6</sub> alkyl, C<sub>1-6</sub> alkoxy, or C<sub>1-6</sub> alkylamino, (15) C<sub>1-6</sub> alkoxy-(CH<sub>2</sub>CH<sub>2</sub>O)<sub>m</sub> wherein m is an integer of 1 to 5, (16) carboxyl, (17) an oxygen atom (=O), or (18) C<sub>3-7</sub> cycloalkyl, and, in the case of the mono-arylamino group, the amino group is optionally substituted by C<sub>1-6</sub> alkyl optionally substituted by hydroxyl or a halogen atom,

in (I) the mono- or di-C<sub>1-6</sub> alkylamino, the di-C<sub>1-6</sub> alkyl group may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by a halogen atom; C<sub>1-6</sub> alkyl optionally substituted by hydroxyl, a halogen atom, or aryl optionally substituted by a halogen atom, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkyloxy, a heterocyclic group optionally substituted by a halogen atom, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkyloxy, and, when one or two alkyl groups on the amino group and the cyclic amino moiety are substituted by two C<sub>1-6</sub> alkyl groups, they together may form C<sub>3-7</sub> cycloalkyl; C<sub>1-6</sub> alkoxy; C<sub>1-6</sub> alkylthio; mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two C<sub>1-6</sub> alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by hydroxyl or a halogen atom; arylamino in which the amino group is optionally substituted by C<sub>1-6</sub> alkyl; mono- or di-C<sub>1-6</sub> alkylcarbamoylmethyl in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by hydroxyl; aryloxy; arylthio; an oxygen atom (=O); hydroxyl;



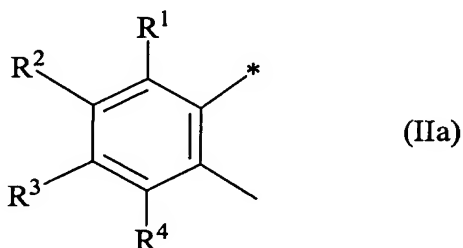
carboxyl; C<sub>1-6</sub> alkoxy- or aryloxy-carbonyl; C<sub>1-6</sub> alkylcarbonyl; aryl optionally substituted by a halogen atom or hydroxyl; or a heterocyclic group,

in (p) the mono- or di-C<sub>2-6</sub> alkenylamino group, the amino group of the monoalkenylamino group is optionally substituted by C<sub>1-6</sub> alkyl optionally substituted by hydroxyl or a halogen atom, and the di-C<sub>2-6</sub> alkenyl together may form unsaturated cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkenyl groups on the amino group or the unsaturated cyclic amino moiety is optionally substituted by a halogen atom; C<sub>1-6</sub> alkyl optionally substituted by hydroxyl, a halogen atom, aryl optionally substituted by a halogen atom, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkyloxy, a heterocyclic group optionally substituted by a halogen atom, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkyloxy, and, when one or two alkyl groups on the amino group and the cyclic amino moiety are substituted by two C<sub>1-6</sub> alkyl groups, they together may form C<sub>3-7</sub> cycloalkyl; C<sub>1-6</sub> alkoxy; C<sub>1-6</sub> alkylthio; mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two C<sub>1-6</sub> alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by hydroxyl or a halogen atom; arylamino in which the amino group is optionally substituted by C<sub>1-6</sub> alkyl; mono- or di-C<sub>1-6</sub> alkylcarbamoylmethyl in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by hydroxyl; aryloxy; arylthio; an oxygen atom (=O); hydroxyl; carboxyl; C<sub>1-6</sub> alkoxy- or aryloxy-carbonyl; C<sub>1-6</sub> alkylcarbonyl; aryl optionally substituted by a halogen atom or hydroxyl; or a heterocyclic group,

when the carbocyclic moiety and heterocyclic moiety represented by A are substituted by two (c) C<sub>1-6</sub> alkyl groups or (m) C<sub>2-6</sub> alkenyl groups, the alkyl or alkenyl groups together with the carbon atoms to which they are respectively attached may form an unsaturated five to seven-membered carbocyclic ring, and

\* represents a bond to  $-\text{C}(=\text{O})-\text{N}(-\text{Z})(-\text{R}^{104})$ .

Claim 4 (Currently Amended): The compound according to claim 1 [[or 2]], wherein  
A represents formula (IIa):



wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, and R<sup>4</sup>, which may be the same or different, represent

(a) a halogen atom;

(b) hydroxyl;

(c) C<sub>1-6</sub> alkyl;

(d) C<sub>1-6</sub> alkoxy;

(e) aryl;

(f)-aryloxy;

(g) arylthio;

(h) alkylthio;

(i) nitro;

(j) amino; or

(k) a hydrogen atom,

(c) the C<sub>1-6</sub> alkyl group, (d) the C<sub>1-6</sub> alkoxy group, (e) the aryl group,

(f) the aryloxy group, (g) the arylthio group, and (h) the alkylthio group are optionally substituted by (1) hydroxyl, (2) thiol, (3) amino, (4) C<sub>1-6</sub> alkoxy, (5) C<sub>1-6</sub> alkylthio, (6) C<sub>1-6</sub> alkylsulfonyl, (7) mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, (8) aryloxy, (9) arylthio, (10)

arylsulfonyl, (11) aryl, (12) a heterocyclic group, (13) a halogen atom, or (14) arylamino in which the amino group is optionally substituted by C<sub>1-6</sub> alkyl, and the aryl group is optionally substituted by halogen, C<sub>1-6</sub> alkyl, C<sub>1-6</sub> alkoxy, or C<sub>1-6</sub> alkylamino, and

\* represents a bond to -C(=O)-N(-Z)(-R<sup>104</sup>).

Claim 5 (Currently Amended): The compound according to claim 3 [[or 4]], wherein

R<sup>1</sup>, R<sup>3</sup>, and R<sup>4</sup>, which may be the same or different, represent

a hydrogen atom;

a halogen atom;

C<sub>1-6</sub> alkyl in which the alkyl group is optionally substituted by C<sub>1-6</sub> alkoxy or a halogen atom;

aryl optionally substituted by C<sub>1-6</sub> alkoxy or a halogen atom;

C<sub>1-6</sub> alkoxy in which the alkoxy group is optionally substituted by C<sub>1-6</sub> alkoxy or a halogen atom; or

aryloxy optionally substituted by C<sub>1-6</sub> alkoxy or a halogen atom,

R<sup>2</sup> represents

a hydrogen atom;

a halogen atom;

hydroxyl;

C<sub>1-6</sub> alkyl in which the alkyl group is optionally substituted by (1) hydroxyl, (2) thiol, (3) amino, (4) C<sub>1-6</sub> alkoxy, (5) C<sub>1-6</sub> alkylthio, (6) C<sub>1-6</sub> alkylsulfonyl, (7) mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, (8) aryloxy, (9) arylthio, (10) arylsulfonyl, (11) aryl, (12) a heterocyclic group, (13) a halogen atom, or (14) arylamino in which the amino group is

optionally substituted by C<sub>1-6</sub> alkyl, and the aryl group is optionally substituted by a halogen atom, C<sub>1-6</sub> alkyl, C<sub>1-6</sub> alkoxy, or C<sub>1-6</sub> alkylamino; or

C<sub>1-6</sub> alkoxy in which the alkoxy group is optionally substituted by (1) hydroxyl, (2) thiol, (3) amino, (4) C<sub>1-6</sub> alkoxy, (5) C<sub>1-6</sub> alkylthio, (6) C<sub>1-6</sub> alkylsulfonyl, (7) mono- or di-C<sub>1-6</sub> alkylamino in which di-C<sub>1-6</sub> alkylamino may form cyclic amino optionally containing 1 to 3 heteroatoms, (8) aryloxy, (9) arylthio, (10) arylsulfonyl, (11) aryl, (12) a heterocyclic group, or (13) a halogen atom.

Claim 6 (Currently Amended): The compound according to claim 3 [[or 4]], wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup>, which may be the same or different, represent a hydrogen atom; a halogen atom; hydroxyl; optionally substituted C<sub>1-6</sub> alkyl; optionally substituted C<sub>1-6</sub> alkenyl; optionally substituted C<sub>1-6</sub> alkoxy; optionally substituted mono- or di-aryl amino; optionally substituted mono- or di-C<sub>1-6</sub> alkyl amino in which the dialkyl amino together may form optionally substituted cyclic amino optionally containing 1 to 3 heteroatoms; optionally substituted mono- or di-C<sub>2-6</sub> alkenyl amino in which the di-C<sub>2-6</sub> alkenyl amino group together may form optionally substituted unsaturated cyclic amino optionally containing 1 to 3 heteroatoms, and, when R<sup>2</sup> and R<sup>3</sup> are optionally substituted C<sub>1-6</sub> alkyl or optionally substituted C<sub>2-6</sub> alkenyl, the alkyl or alkenyl groups together with the carbon atoms to which they are respectively attached may form an unsaturated five- to seven-membered carbocyclic ring.

Claim 7 (Currently Amended): The compound according to claim 3 [[or 4]], wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, and R<sup>4</sup>, which may be the same or different, represent a hydrogen atom; a halogen atom; hydroxyl; optionally substituted C<sub>1-6</sub> alkyl; or optionally substituted C<sub>1-6</sub> alkoxy.

Claim 8 (Currently Amended): The compound according to claim 3 [[or 4]], wherein  $R^1$ ,  $R^2$ ,  $R^3$ , and  $R^4$  represent a hydrogen atom.

Claim 9 (Currently Amended): The compound according to claim 3 [[or 4]] wherein  $R^1$  and  $R^4$  represent a hydrogen atom, any one of  $R^2$  and  $R^3$  represents a halogen atom; hydroxyl; optionally substituted  $C_{1-6}$  alkyl; optionally substituted  $C_{1-6}$  alkoxy; optionally substituted mono- or di-arylamino; optionally substituted mono- or di- $C_{1-6}$  alkylamino in which the dialkylamino together may form optionally substituted cyclic amino optionally containing 1 to 3 heteroatoms; optionally substituted mono- or di- $C_{2-6}$  alkenylamino in which the di- $C_{2-6}$  alkenylamino group together may form optionally substituted unsaturated cyclic amino, wherein the cyclic amino groups may contain 1 to 3 heteroatoms, and the other represents a hydrogen atom.

Claim 10 (Currently Amended): The compound according to claim 3 [[or 4]], wherein  $R^1$  and  $R^4$  represent a hydrogen atom, and any one of  $R^2$  and  $R^3$  represents a halogen atom; hydroxyl; optionally substituted  $C_{1-6}$  alkyl; optionally substituted  $C_{1-6}$  alkoxy, and the other represents a hydrogen atom.

Claim 11 (Currently Amended): The compound according to claim 3 [[or 4]], wherein  $R^1$  and  $R^4$  represent a hydrogen atom, and  $R^2$  and  $R^3$ , which may be the same or different, represent a halogen atom; hydroxyl; optionally substituted  $C_{1-6}$  alkyl; or optionally substituted  $C_{1-6}$  alkoxy.

Claim 12 (Currently Amended): The compound according to claim 3 [[or 4]], wherein  $R^1$  and  $R^4$  represent a hydrogen atom, and  $R^2$  and  $R^3$  together with the carbon atoms

to which they are respectively attached form an unsaturated five-to seven-membered carbocyclic ring.

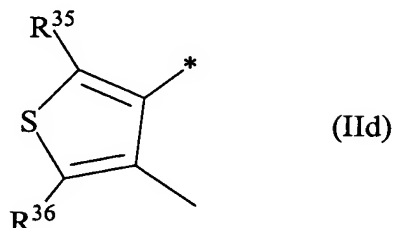
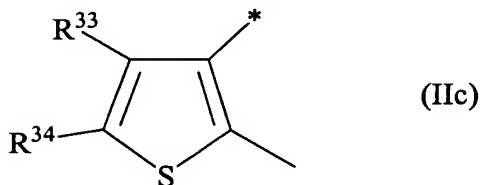
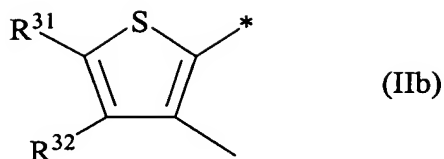
Claim 13 (Currently Amended): The compound according to claim 3 [[or 4]], wherein  $R^1$  and  $R^4$  represent a hydrogen atom, and  $R^2$  and  $R^3$ , which may be the same or different, represent optionally substituted  $C_{1-6}$  alkoxy.

Claim 14 (Currently Amended): The compound according to claim 3 [[or 4]], wherein  $R^1$  and  $R^4$  represent a hydrogen atom, any one of  $R^2$  and  $R^3$  represents optionally substituted mono- or di- $C_{1-6}$  alkylamino in which the di- $C_{1-6}$  alkylamino may form cyclic amino optionally containing 1 to 3 heteroatoms, and the other represents a hydrogen atom.

Claim 15 (Currently Amended): The compound according to claim 3 [[or 4]], wherein  $R^1$  and  $R^4$  represent a hydrogen atom, any one of  $R^2$  and  $R^3$  represent optionally substituted  $C_{1-6}$  alkoxy, and the other represents a hydrogen atom.

Claim 16 (Currently Amended): The compound according to claim 6 [[or 7]], wherein  $R^1$  and  $R^4$  represent a hydrogen atom.

Claim 17 (Currently Amended): The compound according to claim 1 [[or 2]], wherein A represents formula (11b), (11c), or (11d):



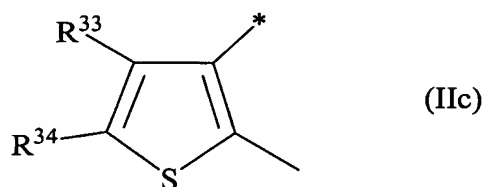
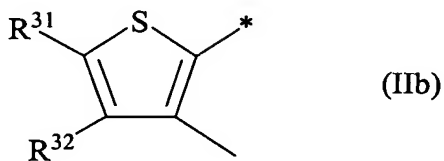
wherein

$R^{31}$ ,  $R^{32}$ ,  $R^{33}$ ,  $R^{34}$ ,  $R^{35}$ , and  $R^{36}$ , which may be the same or different, represent a hydrogen atom; a halogen atom; or  $C_{1-6}$  alkyl in which the alkyl group is optionally substituted by (1) hydroxyl, (2) thiol, (3) amino, (4)  $C_{1-6}$  alkoxy, (5)  $C_{1-5}$  alkylthio, (6)  $C_{1-6}$  alkylsulfonyl, (7) mono- or di- $C_{1-6}$  alkylamino in which the di- $C_{1-6}$  alkylamino may form cyclic amino optionally containing 1 to 3 heteroatoms, (8) aryloxy, (9) arylthio, (10) arylsulfonyl, (11) aryl, (12) a heterocyclic group, (13) a halogen atom, or (14) arylamino in which the amino group is optionally substituted by  $C_{1-6}$  alkyl, and the aryl group is optionally substituted by a halogen,  $C_{1-6}$  alkyl,  $C_{1-6}$  alkoxy, or  $C_{1-6}$  alkylamino; or  $C_{2-6}$  alkenyl,

when  $R^{31}$  and  $R^{32}$  represent alkyl or alkenyl, the alkyl or alkenyl groups together with the carbon atoms to which they are respectively attached may form an unsaturated five- to seven-membered carbocyclic ring, and, when  $R^{33}$  and  $R^{34}$  represent alkyl or alkenyl, the alkyl or alkenyl groups together with the carbon atoms to which they are respectively attached may form an unsaturated five- to seven-membered carbocyclic ring, and

\* represents a bond to  $-C(=O)-N(-Z)(-R^{104})$ .

Claim 18 (Currently Amended): The compound according to claim 1 [[or 2]],  
wherein A represents formula (11b) or (IIc):



wherein

$R^{31}$ ,  $R^{32}$ ,  $R^{33}$ , and  $R^{34}$ , which may be the same or different, represent a hydrogen atom; a halogen atom; or  $C_{1-6}$  alkyl in which the alkyl group is optionally substituted by (1) hydroxyl, (2) thiol, (3) amino, (4)  $C_{1-6}$  alkoxy, (5)  $C_{1-6}$  alkylthio, (6)  $C_{1-6}$  alkylsulfonyl, (7) mono- or di- $C_{1-6}$  alkylamino in which the di- $C_{1-6}$  alkylamino may form cyclic amino optionally containing 1 to 3 heteroatoms, (8) aryloxy, (9) arylthio, (10) arylsulfonyl, (11) aryl, (12) a heterocyclic group, (13) a halogen atom, or (14) arylamino in which the amino group is optionally substituted by  $C_{1-6}$  alkyl, and the aryl group is optionally substituted by a halogen,  $C_{1-6}$  alkyl,  $C_{1-6}$  alkoxy, or  $C_{1-6}$  alkylamino,

when  $R^{31}$  and  $R^{32}$  represent alkyl, the alkyl groups together with the carbon atoms to which they are respectively attached may form an unsaturated five- to seven-membered carbocyclic ring, and, when  $R^{33}$  and  $R^{34}$  represent alkyl, the alkyl groups together with the carbon atoms to which they are respectively attached may form an unsaturated five- to seven-membered carbocyclic ring, and

\* represents a bond to  $-C(=O)-N(-Z)(-R^{104})$ .



Claim 19 (Currently Amended): The compound according to claim 17 [[or 18]], wherein A represents formula (11b),

(i)  $R^{31}$  and  $R^{32}$  represent a hydrogen atom,

(ii) any one of  $R^{31}$  and  $R^{32}$  represents a hydrogen atom, and the other represents  $C_{1-6}$  alkyl optionally substituted by mono- or di- $C_{1-6}$  alkylamino, which may form cyclic amino, or a halogen atom, and the cyclic amino group may contain 1 to 3 heteroatoms,

(iii)  $R^{31}$  and  $R^{32}$ , which may be the same or different, represent  $C_{1-6}$  alkyl optionally substituted by mono- or di- $C_{1-6}$  alkylamino, which may form cyclic amino, or a halogen atom, and the cyclic amino group may contain 1 to 3 heteroatoms, or

(iv)  $R^{31}$  and  $R^{32}$  together with the carbon atoms to which they are respectively attached form an unsaturated five- to seven-membered carbocyclic ring.

Claim 20 (Currently Amended): The compound according to claim 17 [[or 18]], wherein A represents formula (IIb),  $R^{31}$  and  $R^{32}$  represent a hydrogen atom, or any one of  $R^{31}$  and  $R^{32}$  represents a hydrogen atom with the other representing  $C_{1-6}$  alkyl optionally substituted by a halogen atom, or  $R^{31}$  and  $R^{32}$  together with the carbon atoms to which they are respectively attached form an unsaturated five- to seven-membered carbocyclic ring.

Claim 21 (Currently Amended): The compound according to claim 17 [[or 18]], wherein A represents formula (IIc),

(i)  $R^{33}$  and  $R^{34}$  represent a hydrogen atom,

(ii) any one of  $R^{33}$  and  $R^{34}$  represents a hydrogen atom, and the other represents  $C_{1-6}$  alkyl optionally substituted by mono- or di- $C_{1-6}$  alkylamino, which may form cyclic amino, or a halogen atom, and the cyclic amino group may contain 1 to 3 heteroatoms,

(iii)  $R^{33}$  and  $R^{34}$ , which may be: the same or different, represent  $C_{1-6}$  alkyl optionally substituted by mono- or di- $C_{1-6}$  alkylamino, which may form cyclic amino, or a halogen atom, and the cyclic amino group may contain 1 to 3 heteroatoms, or

(iv)  $R^{33}$  and  $R^{34}$  together with the carbon atoms to which they are respectively attached form an unsaturated five- to seven-membered carbocyclic ring.

Claim 22 (Currently Amended): The compound according to claim 17 [[or 18]], wherein A represents formula (IIc),  $R^{33}$  and  $R^{34}$  represent a hydrogen atom, or any one of  $R^{33}$  and  $R^{34}$  represents a hydrogen atom with the other representing  $C_{1-6}$  alkyl optionally substituted by a halogen atom, or  $R^{33}$  and  $R^{34}$  together with the carbon atoms to which they are respectively attached form an unsaturated five- to seven-membered carbocyclic ring.

Claim 23 (Original): The compound according to claim 17, wherein A represents formula (IId),  $R^{35}$  and  $R^{36}$  represent a hydrogen atom, or any one of  $R^{35}$  and  $R^{36}$  represents a hydrogen atom with the other representing  $C_{1-6}$  alkyl optionally substituted by a halogen atom.

Claim 24 (Currently Amended): The compound according to claim 1 [[or 2]], wherein  $R^5$  represents optionally substituted  $C_{5-7}$  cycloalkyl, optionally substituted aryl, an optionally substituted saturated or unsaturated five- or six membered heterocyclic group, or an optionally substituted saturated or unsaturated nine- to eleven-membered bicyclic heterocyclic group.

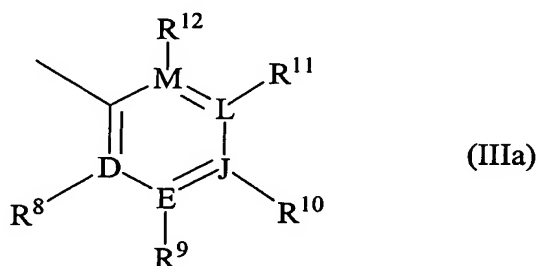
Claim 25 (Original): The compound according to claim 24, wherein the aryl group is phenyl or naphthyl.

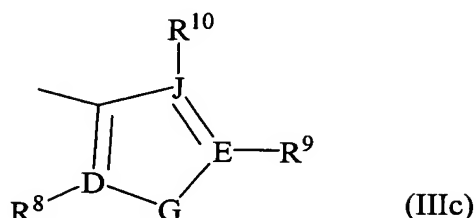
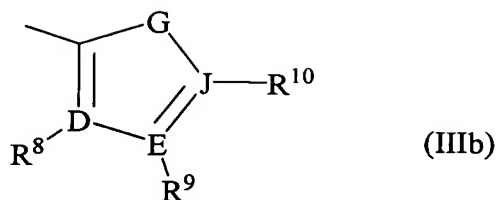
Claim 26 (Original): The compound according to claim 24, wherein the heterocyclic group is selected from pyridyl, furyl, thienyl, isoxazole, pyrimidyl, and quinoxaliny.

Claim 27 (Currently Amended): The compound according to claim 1 [[or 2]], wherein  $R^5$  represents a cyclic group selected from  $C_{5-7}$  cycloalkyl, phenyl, pyridyl, furyl, thienyl, isoxazole, pyrimidyl, and quinoxaliny, in which the cyclic group is optionally substituted by a halogen atom;  $C_{1-6}$  alkyl optionally substituted by a halogen atom;  $C_{1-6}$  alkoxy optionally substituted by a halogen atom; or hydroxyl.

Claim 28 (Currently Amended): The compound according to claim 1 [[or 2]], wherein  $R^5$  represents a cyclic group selected from  $C_{5-7}$  cycloalkyl, phenyl, pyridyl, furyl, thienyl, isoxazole, pyrimidyl, and quinoxaliny, in which the cyclic group is optionally substituted by  $C_{1-6}$  alkyl optionally substituted by optionally substituted  $C_{1-6}$  alkoxy, optionally substituted  $C_{1-6}$  alkylthio, optionally substituted  $C_{1-6}$  alkylsulfinyl, optionally substituted  $C_{1-6}$  alkylsulfonyl, or optionally substituted mono- or di- $C_{1-6}$  alkylamino in which the di- $C_{1-6}$  alkylamino may form cyclic amino optionally containing 1 to 3 heteroatoms.

Claim 29 (Currently Amended): The compound according to claim 1 [[or 2]], wherein  $R^5$  represents a group of formula (IIIa), (IIIb), or (IIIc);





wherein

D, E, J, L, and M, which may be the same or different, represent a carbon or nitrogen atom,

G represents an oxygen or sulfur atom,

$R^8$ ,  $R^9$ ,  $R^{10}$ ,  $R^{11}$ , and  $R^{12}$ , which may be the same or different, represent

(I) a halogen atom;

(II)  $C_{1-6}$  alkyl optionally containing a substituent selected from the group consisting of (1) hydroxyl, (2) thiol, (3) amino, (4)  $C_{1-6}$  alkoxy, (5)  $C_{1-6}$  alkylthio, (6)  $C_{1-6}$  alkylsulfinyl, (7)  $C_{1-6}$  alkylsulfonyl, (8) mono- or di- $C_{1-6}$  alkylamino, (8') amino substituted by a heterocyclic group optionally substituted by  $C_{1-6}$  alkyl, (9)  $C_{1-6}$  alkylcarbonyloxy, (10)  $C_{1-6}$  alkylcarbonylthio, (11)  $C_{1-6}$  alkylcarbonylamino, (12) aryloxy, (13) arylthio, (14) arylsulfinyl, (15) arylsulfonyl, (16) arylamino, (17)  $C_{1-6}$  alkyl- or aryl-sulfonylamino, (18)  $C_{1-6}$  alkyl- or aryl-ureido, (19)  $C_{1-6}$  alkoxy- or aryloxy-carbonylamino, (20)  $C_{1-6}$  alkylamino- or arylamino-carbonyloxy, (21) carboxyl, (22) nitro, (23) a heterocyclic group, (23') Het-S(=O)<sub>j</sub>- wherein Het represents a heterocyclic group, j is 0, 1, or 2, and Het is optionally substituted by alkyl optionally substituted by mono- or di- $C_{1-6}$  alkylamino in which the di- $C_{1-6}$  alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms and one or two alkyl groups

on the amino group and the cyclic amino moiety are optionally substituted by hydroxyl, (24) cyano, and (25) a halogen atom,

wherein the alkyl moiety in (4) the C<sub>1-6</sub> alkoxy group, (5) the C<sub>1-6</sub> alkylthio group, (6) the C<sub>1-6</sub> alkylsulfinyl group, and (7) the C<sub>1-6</sub> alkylsulfonyl group is optionally substituted by a hydrogen atom; a halogen atom; C<sub>1-6</sub> alkyl; C<sub>1-6</sub> alkoxy; C<sub>1-6</sub> alkylthio; mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms; aryloxy; arylthio; hydroxyl; carboxyl; -S(=O)<sub>2</sub>(-OH), C<sub>1-6</sub> alkoxy- or aryloxy-carbonyl; C<sub>1-6</sub> alkylcarbonyl; aryl; or a heterocyclic group optionally substituted by alkyl optionally substituted by mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by hydroxy, and

in (8) the mono- or di-C<sub>1-6</sub> alkylamino group, the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by a halogen atom; C<sub>1-6</sub> alkyl optionally substituted by hydroxyl, a halogen atom, aryl optionally substituted by a halogen atom, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkyloxy, or a heterocyclic group optionally substituted by a halogen atom, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkyloxy, and, when one or two alkyl groups on the amino group and the cyclic amino moiety are substituted by two C<sub>1-6</sub> alkyl groups, they together may form C<sub>3-7</sub> cycloalkyl; C<sub>1-6</sub> alkoxy; C<sub>1-6</sub> alkylthio; mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by hydroxyl; arylamino in which the amino group is optionally substituted by C<sub>1-6</sub> alkyl; mono- or di-C<sub>1-6</sub> alkylcarbonylmethyl in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkyl groups on

the amino group and the cyclic amino moiety are optionally substituted by hydroxyl; aryloxy; arylthio; an oxygen atom (=O); hydroxyl; carboxyl; C<sub>1-6</sub> alkoxy- or aryloxy-carbonyl; C<sub>1-6</sub> alkylcarbonyl; aryl optionally substituted by a halogen atom or hydroxyl; or a heterocyclic group, and, when one carbon atom in the cyclic amino moiety is substituted by two C<sub>1-6</sub>, alkoxy groups which may be the same or different, the two alkoxy groups together may form group -O-(CH<sub>2</sub>)<sub>p</sub>-O- wherein p is an integer of 2 to 4, and the cyclic amino group may condense with a monocyclic or bicyclic aromatic carbocyclic ring or a monocyclic or bicyclic aromatic heterocyclic ring to represent a bicyclic or tricyclic heterocyclic group;

(III) C<sub>1-6</sub> alkoxy optionally substituted by a halogen atom;

(IV) C<sub>1-6</sub> alkylthio optionally substituted by a halogen atom;

(V) C<sub>3-7</sub> cycloalkyl;

(VI) aryl;

(VII) aryloxy;

(VIII) C<sub>1-6</sub> alkylcarbonylamino;

(VIX) C<sub>1-6</sub> alkylcarbonyloxy;

(X) hydroxyl;

(XI) nitro;

(XII) cyano;

(XIII) amino;

(XIV) mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms;

(XV) arylamino;

(XVI) C<sub>1-6</sub> alkyl- or aryl-sulfonylamino;

(XVII) C<sub>1-6</sub> alkyl- or aryl-ureido;

(XVIII) C<sub>1-6</sub> alkoxy- or aryloxy-carbonylamino;

(XIX) C<sub>1-6</sub> alkylamino- or arylamino-carbonyloxy;

(XX) C<sub>1-6</sub> alkoxy- or aryloxy-carbonyl;

(XXI) acyl;

(XXII) carboxyl;

(XXIII) carbamoyl;

(XXIV) mono- or di-alkylcarbamoyl;

(XXV) a heterocyclic group;

(XXVI) alkyl- or aryl-sulfonyl;

(XXVII) C<sub>2-6</sub> alkenyloxy;

(XXVIII) C<sub>2-6</sub> alkenyloxy; or

(XXIX) a hydrogen atom, and

when D, E, J, L, or M represents a nitrogen atom, R<sup>8</sup>, R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, and R<sup>12</sup> each are absent, or otherwise may combine with a nitrogen atom to form N-oxide (N → O).

Claim 30 (Original): The compound according to claim 29, wherein

R<sup>8</sup>, R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, and R<sup>12</sup>, which may be the same or different, represent  
a hydrogen atom;

a halogen atom;

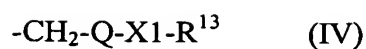
hydroxymethyl;

C<sub>1-6</sub> alkyl optionally substituted by a halogen atom; or

C<sub>1-6</sub> alkoxy optionally substituted by a halogen atom.

Claim 31 (Original): The compound according to claim 27, wherein

substituted C<sub>1-6</sub> alkyl which may be represented by R<sup>8</sup>, R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, and R<sup>12</sup> represents  
a group of formula (IV)



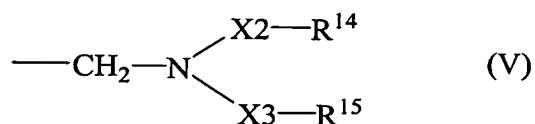
wherein

Q represents an oxygen atom, a sulfur atom, sulfinyl, or sulfonyl,

X1 represents a bond or straight chain or branched chain alkylene having 1 to b carbon atoms,

R<sup>13</sup> represents a hydrogen atom, a halogen atom, C<sub>1-6</sub>, alkyl, C<sub>1-6</sub> alkoxy, C<sub>1-6</sub> alkylthio, mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, aryloxy, arylthio, hydroxyl, carboxyl, -S(=O)<sub>2</sub>(-OH), C<sub>1-6</sub> alkoxy- or aryloxy-carbonyl, C<sub>1-6</sub> alkylcarbonyl, aryl, or a heterocyclic group optionally substituted by alkyl optionally substituted by mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by hydroxyl;

or a group of formula (V)



wherein

X2 represents a bond or straight chain or branched chain alkylene having 1 to 5 carbon atoms,

X3 represents a bond or straight chain or branched chain alkylene having 1 to 5 carbon atoms,

R<sup>14</sup> and R<sup>15</sup>, which may be the same or different, represent a hydrogen atom; a halogen atom; C<sub>1-6</sub> alkyl optionally substituted by hydroxyl, a halogen atom, aryl optionally substituted by a halogen atom, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkyloxy, a heterocyclic group optionally substituted by a halogen atom, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub>, alkyloxy, and, when one or two alkyl



groups on the amino group and the cyclic amino moiety are substituted by two C<sub>1-6</sub> alkyl groups, they together may form C<sub>3-7</sub> cycloalkyl; C<sub>1-6</sub> alkoxy; C<sub>1-6</sub> alkylthio; mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by hydroxyl; arylamino in which the amino group is optionally substituted by C<sub>1-6</sub> alkyl; mono- or di-C<sub>1-6</sub> alkylcarbamoylemethyl in which the di-C<sub>1-6</sub> alkylamino may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by hydroxyl; aryloxy; arylthio; an oxygen atom (=O); hydroxyl; carboxyl; C<sub>1-6</sub> alkoxy- or aryloxy-carbonyl; C<sub>1-6</sub> alkylcarbonyl; aryl optionally substituted by a halogen atom or hydroxyl; or a heterocyclic group, provided that, when X<sub>2</sub> represents a bond, R<sup>14</sup> represents a hydrogen atom, or when X<sub>3</sub> represents a bond, R<sup>15</sup> represents a hydrogen atom, or

R<sup>14</sup> and R<sup>15</sup> together with a nitrogen atom to which they are respectively attached to may form a heterocyclic group that may contain 1 to 3 heteroatoms in addition to the nitrogen atom, to which R<sup>14</sup> and R<sup>15</sup> are attached, and is optionally substituted by hydroxyl; C<sub>1-6</sub> alkyl optionally substituted by hydroxyl, a halogen atom, aryl optionally substituted by a halogen atom, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkyloxy, or a heterocyclic group optionally substituted by a halogen atom, C<sub>1-6</sub> alkyl, or C<sub>1-6</sub> alkyloxy, and, when one or two alkyl groups on the amino group and the cyclic amino moiety are substituted by two C<sub>1-6</sub> alkyl groups, they together may form C<sub>3-7</sub> cycloalkyl, mono- or di-C<sub>1-6</sub> alkylamino in which the di-C<sub>1-6</sub> alkylamino may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkyl groups on the amino group and the cyclic amino moiety are optionally substituted by hydroxyl; a saturated or unsaturated five or six-membered heterocyclic group; mono- or di-C<sub>1-6</sub> alkylcarbamoylemethyl in which the di-C<sub>1-6</sub> alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, and one or two alkyl groups on the amino group and the cyclic amino moiety

are optionally substituted by hydroxyl; phenyl; or an oxygen atom (=O), and, when one carbon atom in the cyclic amino moiety is substituted by two C<sub>1-6</sub> alkoxy groups which may be the same or different, the two alkoxy groups together may form group -O-(CH<sub>2</sub>)<sub>p</sub>-O- wherein p is an integer of 2 to 4, and the cyclic amino group may condense with a monocyclic or bicyclic aromatic carbocyclic ring or a monocyclic or bicyclic aromatic heterocyclic ring to represent a bicyclic or tricyclic heterocyclic group.

Claim 32 (Currently Amended): The compound according to ~~any one of claims 29 to 34~~ claim 29, wherein D, E, J, L, and M represent a carbon atom.

Claim 33 (Currently Amended): The compound according to ~~any one of claims 29 to 34~~ claim 29, wherein any one or two of D, E, J, L, and M represent a nitrogen atom and the others represent a carbon atom.

Claim 34 (Currently Amended): The compound according to ~~any one of claims 29 to 34~~ claim 29, wherein R<sup>5</sup> represents formula (IIIa), and D, E, J, L, and M represent a carbon atom.

Claim 35 (Currently Amended): The compound according to ~~any one of claims 29 to 34~~ claim 29, wherein R<sup>5</sup> represents formula (IIIa), and any one or two of D, E, J, L, and M represent a nitrogen atom with the others representing a carbon atom.

Claim 36 (Currently Amended): The compound according to ~~any one of claims 29 to 34~~ claim 29, wherein R<sup>5</sup> represents formula (IIIb), D, E, and J represent a carbon atom, and G represents an oxygen or sulfur atom.

Claim 37 (Currently Amended): The compound according to ~~any one of claims 29 to 31~~ claim 29, wherein R<sup>5</sup> represents formula (IIIc), D, E, and J represent a carbon atom, and G represents an oxygen or sulfur atom.

Claim 38 (Original): The compound according to claim 29, wherein  
R<sup>5</sup> represents formula (IIIa),  
D, E, J, L, and M represent a carbon atom,  
any one or two of R<sup>8</sup>, R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, and R<sup>12</sup>, which may be the same or different, represent a halogen atom; hydroxymethyl; C<sub>1-6</sub> alkyl optionally substituted by a halogen atom; or C<sub>1-6</sub> alkoxy optionally substituted by a halogen atom, and the others represent a hydrogen atom.

Claim 39 (Original): The compound according to claim 29, wherein  
R<sup>5</sup> represents formula (IIIa),  
any one or two of D, E, J, L, and M represent a nitrogen atom, and the others represent a carbon atom,  
any one or two of R<sup>8</sup>, R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, and R<sup>12</sup>, which may be the same or different, represent a halogen atom; hydroxymethyl; C<sub>1-6</sub> alkyl optionally substituted by a halogen atom, or C<sub>1-6</sub> alkoxy optionally substituted by a halogen atom, and the others represent a hydrogen atom.

Claim 40 (Original): The compound according to claim 29, wherein  
R<sup>5</sup> represents formula (IIIb),  
D, E, and J represent a carbon atom, and G represents an oxygen or sulfur atom,

one or two of  $R^8$ ,  $R^9$ , and  $R^{10}$ , which may be the same or different, represent a halogen atom; hydroxymethyl;  $C_{1-6}$  alkyl optionally substituted by a halogen atom; or  $C_{1-6}$  alkoxy optionally substituted by a halogen atom, and the others represent a hydrogen atom.

Claim 41 (Original): The compound according to claim 29, wherein

$R^5$  represents formula (IIIc),

D, E, and J represent a carbon atom, and G represents an oxygen or sulfur atom,

one or two of  $R^8$ ,  $R^9$ , and  $R^{10}$ , which may be the same or different, represent a halogen atom; hydroxymethyl;  $C_{1-6}$  alkyl optionally substituted by a halogen atom; or  $C_{1-6}$  alkoxy optionally substituted by a halogen atom, and the others represent a hydrogen atom.

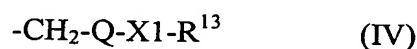
Claim 42 (Original): The compound according to claim 29, wherein

$R^5$  represents formula (IIIa),

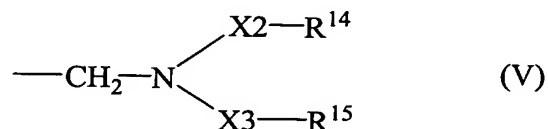
D, E, J, L, and M represent a carbon atom,

$R^8$ ,  $R^9$ , and  $R^{12}$  represent a hydrogen atom,

one of  $R^{10}$  and  $R^{11}$  represents a group of formula (IV)



wherein Q, X1, and  $R^{13}$  are as defined in claim 31, or a group of formula (V)



wherein X2, X3,  $R^{14}$ , and  $R^{15}$  are as defined in claim 31,

and the other group represents a hydrogen atom.

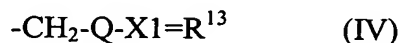
Claim 43 (Original): The compound according to claim 29, wherein

$R^5$  represents formula (IIIa),

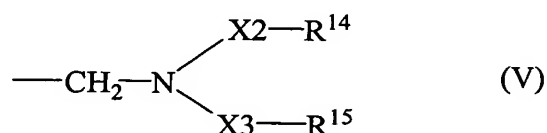
any one or two of D, E, J, L, and M represent a nitrogen atom, and the others represent a carbon atom,

$R^8$ ,  $R^9$ , and  $R^{12}$  represent a hydrogen atom,

one of  $R^{10}$  and  $R^{11}$  represents a group of formula (IV)



wherein Q, X1, and  $R^{13}$  are as defined in claim 31, or a group of formula (V)

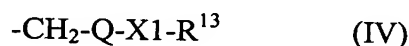


wherein X2, X3,  $R^{14}$ , and  $R^{15}$  are as defined in claim 31, and the other group represents a hydrogen atom.

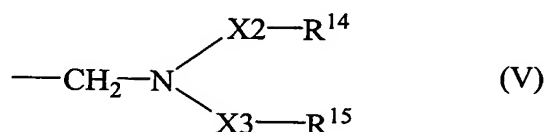
Claim 44 (Original): The compound according to claim 29, wherein

$R^5$  represents formula (IIIb),

D, E, and J represent a carbon atom, and G represents an oxygen or sulfur atom,  
one of  $R^8$ ,  $R^9$ , and  $R^{10}$  represents a group of formula (IV)



wherein Q, X1, and  $R^{13}$  are as defined in claim 31, or a group of formula (V)



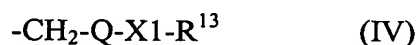
wherein X2, X3,  $R^{14}$ , and  $R^{15}$  are as defined in claim 31, and the other groups represent a hydrogen atom.

Claim 45 (Original): The compound according to claim 29, wherein

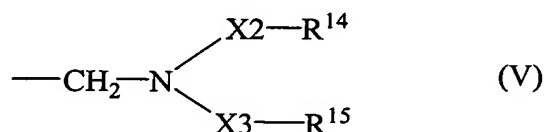
$R^5$  represents formula (IIIc),

D, E, and J represent a carbon atom, and G represents an oxygen or sulfur atom,

one of  $R^8$ ,  $R^9$ , and  $R^{10}$  represents a group of formula (IV)



wherein Q, X1, and  $R^{13}$  are as defined in claim 31, or a group of formula (V)



wherein X2, X3,  $R^{14}$ , and  $R^{15}$  are as defined in claim 31, and the other groups represent a hydrogen atom.

Claim 46 (Currently Amended): The compound according to claim 1 [[or 2]],  
wherein

$R^6$  represents a hydrogen atom; optionally substituted  $\text{C}_{1-6}$  alkyl; or optionally substituted aryl,  $R^7$  represents optionally substituted aryl, optionally substituted aryl  $\text{C}_{1-6}$  alky, optionally substituted aryl  $\text{C}_{2-6}$  alkenyl, or optionally substituted saturated or unsaturated five- or six-membered heterocyclic group.

Claim 47 (Original): The compound according to claim 46, wherein

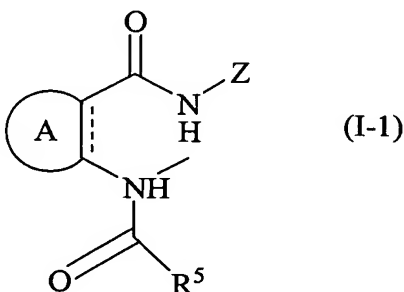
$R^6$  represents a hydrogen atom;  $\text{C}_{1-6}$  alkyl optionally substituted by a halogen atom or  $\text{C}_{1-6}$  alkoxy; or aryl optionally substituted by a halogen atom,  $\text{C}_{1-6}$  alkyl, or  $\text{C}_{1-6}$  alkoxy.

Claim 48 (Original): The compound according to claim 46, wherein  $R^6$  represents a hydrogen atom or  $\text{C}_{1-6}$  alkyl.

Claim 49 (Currently Amended): The compound according to ~~any one of claims 46 to 48~~ claim 46, wherein

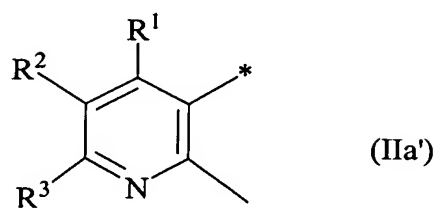
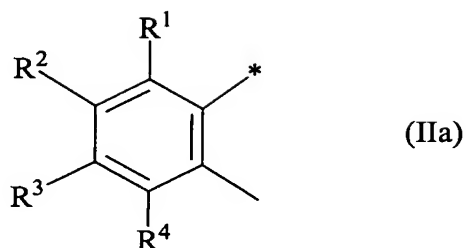
$R^7$  represents a cyclic group selected from phenyl, naphthyl, furyl, pyrrolyl, and thienyl and is optionally substituted by a halogen atom;  $C_{1-6}$  alkyl optionally substituted by a halogen atom;  $C_{1-6}$  alkoxy in which the alkoxy group is optionally substituted by a halogen atom, aryloxy optionally substituted by a halogen atom and  $C_{1-6}$  alkyl,  $C_{1-6}$  alkoxy in which the alkoxy group is optionally substituted by mono- or di- $C_{1-6}$  alkylamine in which the di- $C_{1-6}$  alkylamino group may form cyclic amino optionally containing 1 to 3 heteroatoms, or by a halogen atom, arylthio optionally substituted by a halogen atom and  $C_{1-6}$  alkyl,  $C_{1-6}$  alkylthio in which the alkylthio group is optionally substituted by mono- or di- $C_{1-6}$  alkylamine in which the di- $C_{1-6}$  alkylamino may form cyclic amino optionally containing 1 to 3 heteroatoms, or by a halogen atom, arylamino optionally substituted by  $C_{1-6}$  alkyl, mono- or di- $C_{1-6}$  alkylamine in which the di- $C_{1-6}$  alkylamino may form cyclic amino optionally containing 1 to 3 heteroatoms; hydroxyl; mono- or di- $C_{1-6}$  alkylamino in which the di- $C_{1-6}$  alkylamino may form cyclic amino optionally containing 1 to 3 heteroatoms; nitro;  $C_{2-6}$  alkenyloxy; or  $C_{2-6}$  alkynyloxy.

Claim 50 (Currently Amended): The compound according to claim 1 [[or 2]], wherein formula (I) is represented by formula (I-1)



wherein A,  $R^5$ , Z, and ---- are as defined in claim 1.

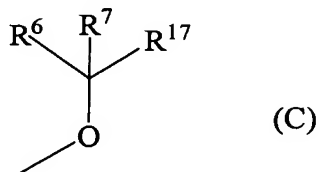
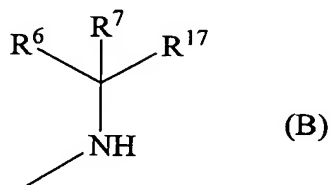
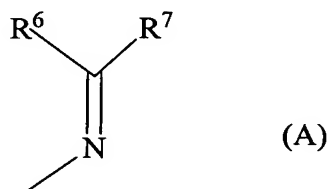
Claim 51 (Original): The compound according to claim 50, wherein A represents formula (IIa) or formula (IIa'):



wherein  $R^1$ ,  $R^2$ ,  $R^3$ , and  $R^4$  are as defined in formula (IIa) and formula (IIa') in claim 3,

$R^5$  represents optionally substituted  $C_{5-7}$  cycloalkyl, optionally substituted aryl, or optionally substituted saturated or unsaturated five- or six-membered heterocyclic group,

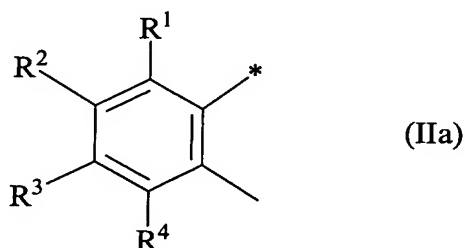
Z represents group (A), group (B), or group (C):





wherein  $R^6$  represents a hydrogen atom or  $C_{1-6}$  alkyl,  $R^7$  represents optionally substituted aryl, optionally substituted aryl  $C_{1-6}$  alkyl, optionally substituted aryl  $C_{2-6}$  alkenyl, or optionally substituted saturated or unsaturated five- or six-membered heterocyclic group, and  $R^{17}$  represents a hydrogen atom.

Claim 52 (Original): The compound according to claim 50, wherein A represents formula (IIa):

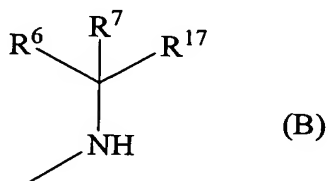
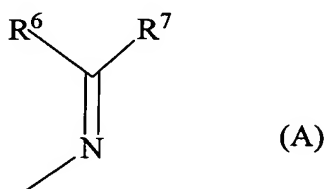


wherein  $R^1$ ,  $R^2$ ,  $R^3$ , and  $R^4$  are as defined in formula (IIa) in claim 3,

---- represents a double bond,

$R^5$  represents optionally substituted  $C_{5-7}$  cycloalkyl, optionally substituted aryl, or optionally substituted saturated or unsaturated five- or six-membered heterocyclic group,

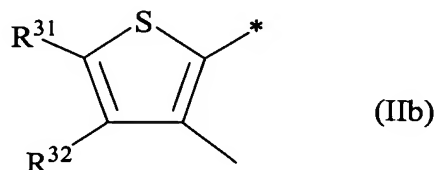
Z represents group (A) or group (B):



wherein  $R^6$  represents a hydrogen atom or  $C_{1-6}$  alkyl,  $R^7$  represents optionally substituted aryl, optionally substituted aryl  $C_{1-6}$  alkyl, optionally substituted aryl  $C_{2-6}$  alkenyl,

or optionally substituted saturated or unsaturated five- or six-membered heterocyclic group,  
and R<sup>17</sup> represents a hydrogen atom.

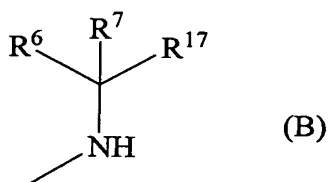
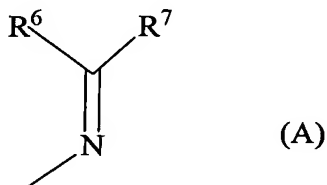
Claim 53 (Original): The compound according to claim 50, wherein A represents  
formula (IIb):



wherein R<sup>31</sup> and R<sup>32</sup> are as defined in formula (IIb) in claim 17,

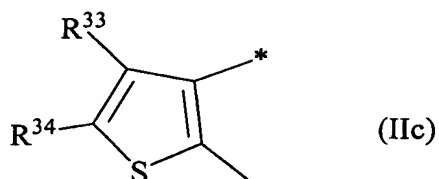
R<sup>5</sup> represents optionally substituted C<sub>5-7</sub> cycloalkyl, optionally substituted aryl, or  
optionally substituted saturated or unsaturated five- or six-membered heterocyclic group,

Z represents group (A) or group (B):



wherein R<sup>6</sup> represents a hydrogen atom or C<sub>1-6</sub> alkyl, R<sup>7</sup> represents optionally  
substituted aryl, optionally substituted aryl C<sub>1-6</sub> alkyl, optionally substituted aryl C<sub>2-6</sub> alkenyl,  
or optionally substituted saturated or unsaturated five- or six-membered heterocyclic group,  
and R<sup>17</sup> represents a hydrogen atom.

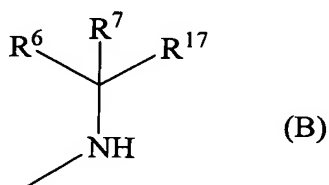
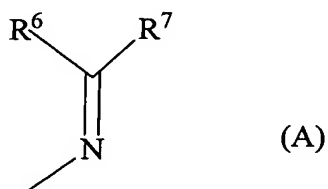
Claim 54 (Original): The compound according to claim 50, wherein A represents formula (IIc):



wherein R<sup>33</sup> and R<sup>34</sup> are as defined in formula (IIc) in claim 17,

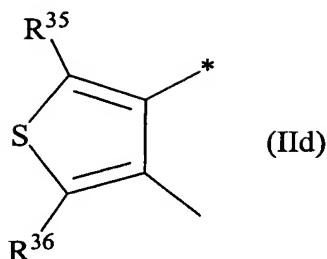
R<sup>6</sup> represents optionally substituted C<sub>5-7</sub> cycloalkyl, optionally substituted aryl, or optionally substituted saturated or unsaturated five- or six-membered heterocyclic group,

Z represents group (A) or group (B):



wherein R<sup>6</sup> represents a hydrogen atom or C<sub>1-6</sub> alkyl, R<sup>7</sup> represents optionally substituted aryl, optionally substituted aryl C<sub>1-6</sub> alkyl, optionally substituted aryl C<sub>2-6</sub> alkenyl, or optionally substituted saturated or unsaturated five- or six-membered heterocyclic group, and R<sup>17</sup> represents a hydrogen atom.

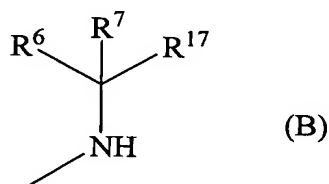
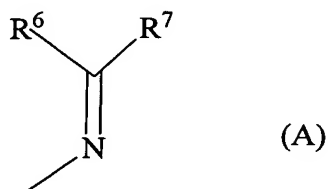
Claim 55 (Original): The compound according to claim 50, wherein A represents formula (IId):



wherein R<sup>35</sup> and R<sup>36</sup> are as defined in formula (IIId) in claim 17,

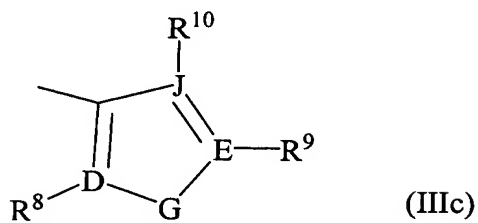
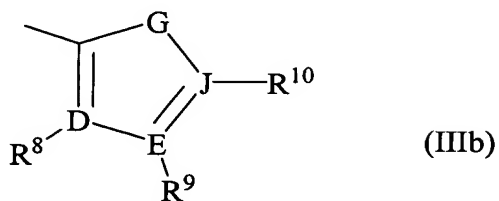
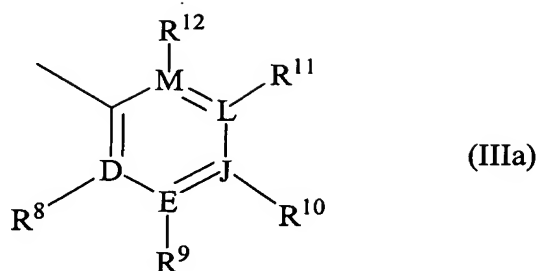
R<sup>5</sup> represents optionally substituted C<sub>5-7</sub> cycloalkyl, optionally substituted aryl, or optionally substituted saturated or unsaturated five- or six-membered heterocyclic group,

Z represents group (A) or group (B):



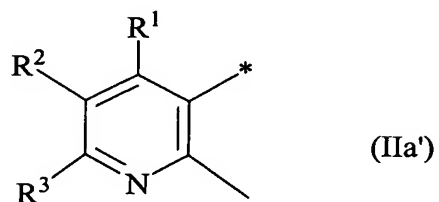
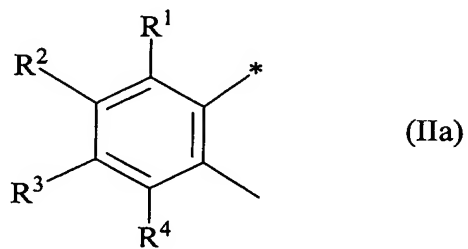
wherein R<sup>6</sup> represents a hydrogen atom or C<sub>1-6</sub> alkyl, R<sub>7</sub> represents optionally substituted aryl, optionally substituted aryl C<sub>1-6</sub> alkyl, optionally substituted aryl C<sub>2-6</sub> alkenyl, or optionally substituted saturated or unsaturated five- or six-membered heterocyclic group, and R<sup>17</sup> represents a hydrogen atom.

Claim 56 (Currently Amended): The compound according to ~~any one of claims 51 to 55~~ claim 51, wherein R<sup>5</sup> represents formula (IIIa), formula (IIIb), or formula (IIIc)



wherein D, E, G, J, L, M, R<sup>8</sup>, R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, and R<sup>12</sup> are as defined in claim 29.

Claim 57 (Original): The compound according to claim 50, wherein A represents formula (IIa) or formula (IIa'):



wherein

(1)  $R^1$ ,  $R^2$ ,  $R^3$ , and  $R^4$  represent a hydrogen atom,

(2)  $R^1$  and  $R^4$  represent a hydrogen atom, any one of  $R^2$  and  $R^3$  represents a halogen atom; hydroxyl; optionally substituted  $C_{1-6}$  alkyl; optionally substituted  $C_{1-6}$  alkoxy; optionally substituted mono- or di-arylamino; optionally substituted mono- or di- $C_{1-6}$  alkylamino in which the dialkylamino together may form optionally substituted cyclic amino optionally containing 1 to 3 heteroatoms; or optionally substituted mono- or di- $C_{2-6}$  alkenylamino in which the di- $C_{2-6}$  alkenylamino group together may form optionally substituted unsaturated cyclic amino optionally containing 1 to 3 heteroatoms, and the other represents a hydrogen atom,

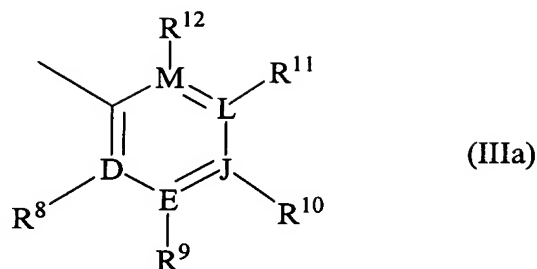
(3)  $R^1$  and  $R^4$  represent a hydrogen atom, and  $R^2$  and  $R^3$ , which may be the same or different, represent a halogen atom; hydroxyl; optionally substituted  $C_{1-6}$  alkyl; or optionally substituted  $C_{1-6}$  alkoxy,

(4)  $R^1$  and  $R^4$  represent a hydrogen atom, and  $R^2$  and  $R^3$  together with the carbon atoms to which they are respectively attached form an unsaturated five- to seven-membered carbocyclic ring,

(5)  $R^1$  and  $R^4$  represent a hydrogen atom, any one of  $R^2$  and  $R^3$  represents optionally substituted mono- or di- $C_{1-6}$  alkylamino in which the di- $C_{1-6}$  alkylamino together may form optionally substituted cyclic amino optionally containing 1 to 3 heteroatoms, and the other represents a hydrogen atom, or

(6)  $R^1$  and  $R^4$  represent a hydrogen atom, any one of  $R^2$  and  $R^3$  represents optionally substituted  $C_{1-6}$  alkoxy, and the other represents a hydrogen atom,

$R^5$  represents formula (IIIa)

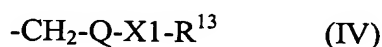


wherein

(i) D, E, J, L, and M represent a carbon atom, any one or two of  $R^8$ ,  $R^9$ ,  $R^{10}$ ,  $R^{11}$ , and  $R^{12}$ , which may be the same or different, represent a halogen atom; hydroxymethyl;  $C_{1-6}$  alkyl optionally substituted by a halogen atom; or  $C_{1-6}$  alkoxy optionally substituted by a halogen atom, and the others represent a hydrogen atom,

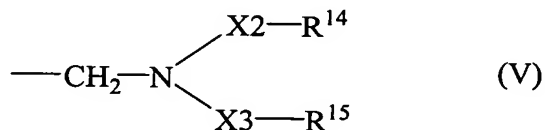
(ii) any one or two of D, E, J, L, and M represent a nitrogen atom, and the others represent a carbon atom, any one or two of  $R^8$ ,  $R^9$ ,  $R^{10}$ ,  $R^{11}$ , and  $R^{12}$  may be the same or different and represent a halogen atom; hydroxymethyl;  $C_{1-6}$  alkyl optionally substituted by a halogen atom, or  $C_{1-6}$  alkoxy optionally substituted by a halogen atom, and the others represent a hydrogen atom,

(iii) D, E, J, L, and M represent a carbon atom,  $R^8$ ,  $R^9$ , and  $R^{12}$  represent a hydrogen atom, any one of  $R^{10}$  and  $R^{11}$  represents a group of formula (IV)



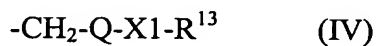
wherein Q, X1, and  $R^{13}$  are as defined in claim 31,

or a group of formula (V)



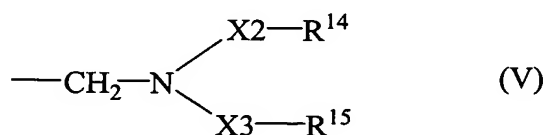
wherein X2, X3,  $R^{14}$ , and  $R^{15}$  are as defined in claim 31, and the other represents a hydrogen atom, or

(iv) any one or two of D, E, J, L, and M represent a nitrogen atom, and the others represent a carbon atom,  $R^8$ ,  $R^9$ , and  $R^{12}$  represent a hydrogen atom, and one of  $R^{10}$  and  $R^{11}$  represents a group of formula (IV)



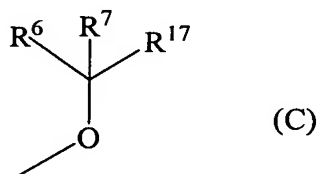
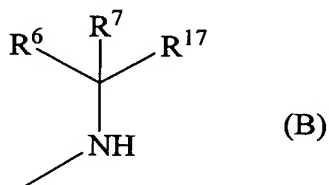
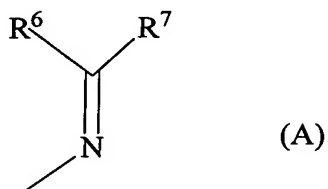
wherein Q, X1, and  $R^{13}$  are as defined in claim 31,

or a group of formula (V)



wherein X2, X3,  $R^{14}$ , and  $R^{15}$  are as defined in claim 31, and the other represents a hydrogen atom,

Z represents group (A), group (B), or group (C):



wherein

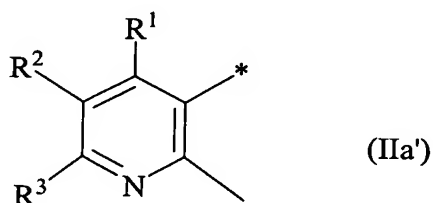
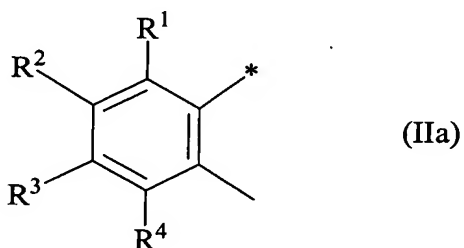
$R^6$  represents a hydrogen atom or  $\text{C}_{1-6}$  alkyl,



$R^7$  represents optionally substituted aryl, optionally substituted aryl  $C_{1-6}$  alkyl, optionally substituted aryl  $C_{2-6}$  alkenyl, or optionally substituted saturated or unsaturated five- or six-membered heterocyclic group, and

$R^{17}$  represents a hydrogen atom,

Claim 58 (Original): The compound according to claim 50, wherein A represents formula (IIa) or formula (IIa')



wherein

(1)  $R^1$ ,  $R^2$ ,  $R^3$ , and  $R^4$  represent a hydrogen atom,

(2)  $R^1$  and  $R^4$  represent a hydrogen atom, any one of  $R^2$  and  $R^3$  represents a halogen atom; hydroxyl; optionally substituted  $C_{1-6}$  alkyl; optionally substituted  $C_{1-6}$  alkoxy; optionally substituted mono- or di-arylamino; optionally substituted mono- or di- $C_{1-6}$  alkylamino in which the dialkylamino together may form optionally substituted cyclic amino optionally containing 1 to 3 heteroatoms; or optionally substituted mono- or di- $C_{2-6}$  alkenylamino in which the di- $C_{2-6}$  alkenylamino group together may form optionally substituted unsaturated cyclic amino optionally containing 1 to 3 heteroatoms, and the other represents a hydrogen atom,

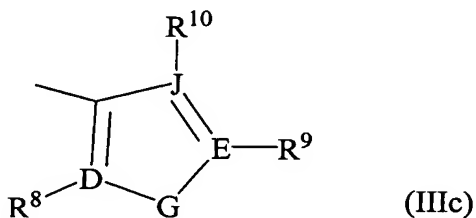
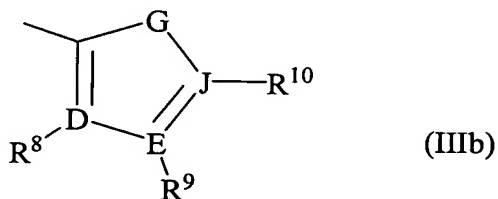
(3)  $R^1$  and  $R^4$  represent a hydrogen atom, and  $R^2$  and  $R^3$ , which may be the same or different, represent a halogen atom; hydroxyl; optionally substituted  $C_{1-6}$  alkyl; or optionally substituted  $C_{1-6}$  alkoxy,

(4)  $R^1$  and  $R^4$  represent a hydrogen atom, and  $R^2$  and  $R^3$  together with the carbon atoms to which they are respectively attached form an unsaturated five- to seven-membered carbocyclic ring,

(5)  $R^1$  and  $R^4$  represent a hydrogen atom, any one of  $R^2$  and  $R^3$  represents optionally substituted mono- or di- $C_{1-6}$  alkylamino in which the di- $C_{1-6}$  alkylamino together may form optionally substituted cyclic amino optionally containing 1 to 3 heteroatoms, and the other represents a hydrogen atom, or

(6)  $R^1$  and  $R^4$  represent a hydrogen atom, any one of  $R^2$  and  $R^3$  represents optionally substituted  $C_{1-6}$  alkoxy, and the other represents a hydrogen atom,

$R^5$  represents formula (IIIb) or formula (IIIc)

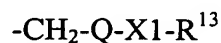


wherein

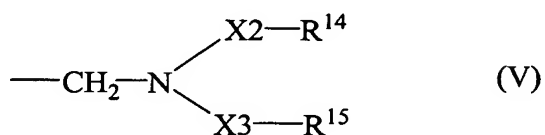
(i) D, E, and J represent a carbon atom, G represents an oxygen or sulfur atom, any one or two of  $R^8$ ,  $R^9$ , and  $R^{10}$ , which may be the same or different, represent a halogen atom;

hydroxymethyl; C<sub>1-6</sub> alkyl optionally substituted by a halogen atom; or C<sub>1-6</sub>, alkoxy optionally substituted by a halogen atom, and the others represent a hydrogen atom, or

(ii) D, E, and J represent a carbon atom, G represents an oxygen or sulfur atom, one of R<sup>8</sup>, R<sup>9</sup>, and R<sup>10</sup> represents a group of formula (IV)



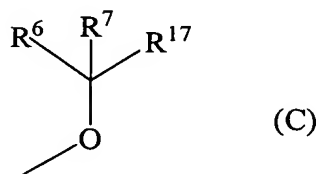
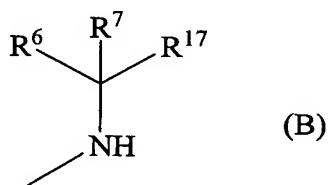
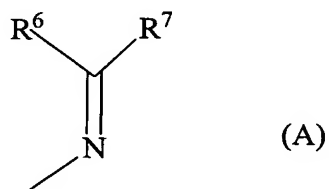
wherein Q, X1, and R<sup>13</sup> are as defined in claim 31, or a group of formula (V)



wherein X2, X3, R<sup>14</sup>, and R<sup>15</sup> are as defined in claim 31,

and the others represent a hydrogen atom,

Z represents group (A), group (B), or group (C):



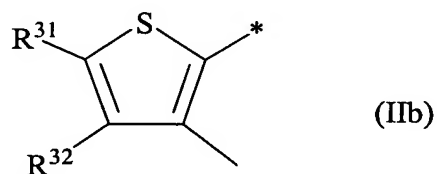
wherein

R<sup>6</sup> represents a hydrogen atom or C<sub>1-6</sub> alkyl,

$R^7$  represents optionally substituted aryl, optionally substituted aryl  $C_{1-6}$  alkyl, optionally substituted aryl  $C_{2-6}$ , alkenyl, or optionally substituted saturated or unsaturated five- or six-membered heterocyclic group, and

$R^{17}$  represents a hydrogen atom.

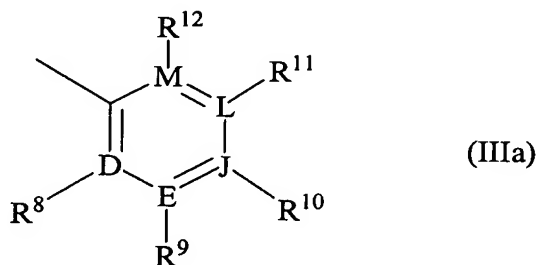
Claim 59 (Original): The compound according to claim 50, wherein A represents formula (IIb)



wherein

- (i)  $R^{31}$  and  $R^{32}$  represent a hydrogen atom,
- (ii) any one of  $R^{31}$  and  $R^{32}$  represents a hydrogen atom, and the other represents  $C_{1-6}$  alkyl optionally substituted by mono or di- $C_{1-6}$  alkylamino, which may form cyclic amino, or a halogen atom, and the cyclic amino group may contain 1 to 3 heteroatoms,
- (iii)  $R^{31}$  and  $R^{32}$ , which may be the same or different, represent  $C_{1-6}$  alkyl optionally substituted by mono- or di- $C_{1-6}$  alkylamino, which may form cyclic amino, or a halogen atom, and the cyclic amino group may contain 1 to 3 heteroatoms, or
- (iv)  $R^{31}$  and  $R^{32}$  together with the carbon atoms to which they are respectively attached form an unsaturated five- to seven-membered carbocyclic ring,

$R^5$  represents formula (IIIa)

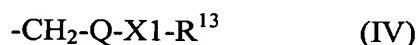


wherein

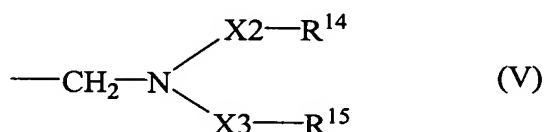
(i) D, E, J, L, and M represent a carbon atom, any one or two of  $R^8$ ,  $R^9$ ,  $R^{10}$ ,  $R^{11}$ , and  $R^{12}$ , which may be the same or different, represent a halogen atom; hydroxymethyl;  $C_{1-6}$  alkyl optionally substituted by a halogen atom; or  $C_{1-6}$  alkoxy optionally substituted by a halogen atom, and the others represent a hydrogen atom,

(ii) any one or two of D, E, J, L, and M represent a nitrogen atom, and the others represent a carbon atom, any one or two of  $R^8$ ,  $R^9$ ,  $R^{10}$ ,  $R^{11}$ , and  $R^{12}$  may be the same or different and represent a halogen atom; hydroxymethyl;  $C_{1-6}$  alkyl optionally substituted by a halogen atom, or  $C_{1-6}$  alkoxy optionally substituted by a halogen atom, and the others represent a hydrogen atom,

(iii) D, E, J, L, and M represent a carbon atom,  $R^8$ ,  $R^9$ , and  $R^{12}$  represent a hydrogen atom, any one of  $R^{10}$  and  $R^{11}$  represents a group of formula (IV)

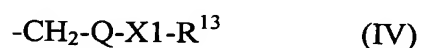


wherein Q, X1, and  $R^{13}$  are as defined in claim 31, or a group of formula (V)

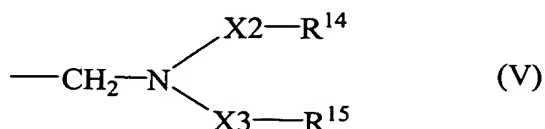


wherein X2, X3,  $R^{14}$ , and  $R^{15}$  are as defined in claim 31, and the other represents a hydrogen atom,

(iv) any one or two of D, E, J, L, and M represent a nitrogen atom, and the others represent a carbon atom,  $R^8$ ,  $R^9$ , and  $R^{12}$  represent a hydrogen atom, and one of  $R^{10}$  and  $R^{11}$  represents a group of formula (IV)

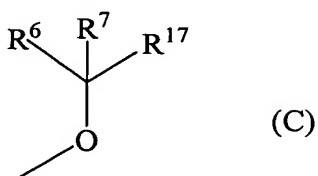
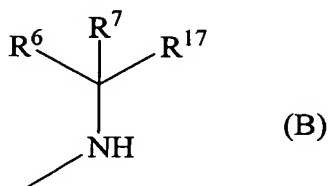
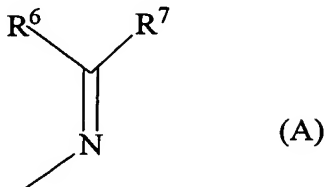


wherein Q, X1, and  $R^{13}$  are as defined in claim 31, or a group of formula (V)



wherein X<sub>2</sub>, X<sub>3</sub>, R<sup>14</sup>, and R<sup>15</sup> are as defined in claim 31, and the other represents a hydrogen atom,

Z represents group (A), group (B), or group (C);



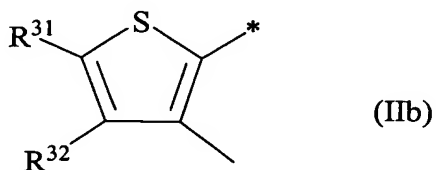
wherein

R<sup>6</sup> represents a hydrogen atom or C<sub>1-6</sub> alkyl,

R<sup>7</sup> represents optionally substituted aryl, optionally substituted aryl C<sub>1-6</sub> alkyl, optionally substituted aryl C<sub>2-6</sub> alkenyl, or optionally substituted saturated or unsaturated five- or six-membered heterocyclic group, and

R<sup>17</sup> represents a hydrogen atom.

Claim 60 (Original): The compound according to claim 50, wherein A represents formula (IIb)



wherein

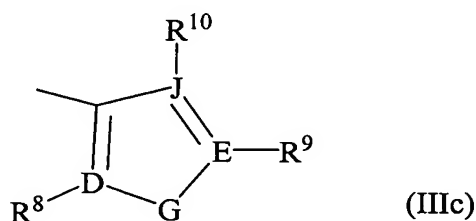
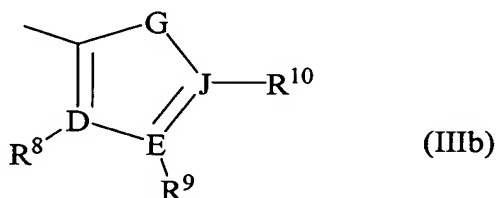
(i)  $R^{31}$  and  $R^{32}$  represent a hydrogen atom,

(ii) any one of  $R^{31}$  and  $R^{32}$  represents a hydrogen atom, and the other represents  $C_{1-6}$  alkyl optionally substituted by mono- or di- $C_{1-6}$  alkylamino, which may form cyclic amino, or a halogen atom, and the cyclic amino group may contain 1 to 3 heteroatoms,

(iii)  $R^{31}$  and  $R^{32}$ , which may be the same or different, represent  $C_{1-6}$  alkyl optionally substituted by mono- or di- $C_{1-6}$  alkylamino, which may form cyclic amino, or a halogen atom, and the cyclic amino group may contain 1 to 3 heteroatoms, or

(iv)  $R^{31}$  and  $R^{32}$  together with the carbon atoms to which they are respectively attached form an unsaturated five- to seven-membered carbocyclic ring,

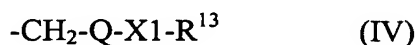
$R^5$  represents formula (IIIb) or formula (IIIc)



wherein

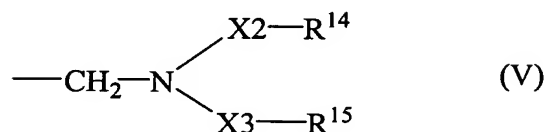
(i) D, E, and J represent a carbon atom, G represents an oxygen or sulfur atom, any one or two of  $R^8$ ,  $R^9$ , and  $R^{10}$ , which may be the same or different, represent a halogen atom; hydroxymethyl;  $C_{1-6}$  alkyl optionally substituted by a halogen atom, or  $C_{1-6}$  alkoxy optionally substituted by a halogen atom, and the others represent a hydrogen atom, or

(ii) D, E, and J represent a carbon atom, G represents an oxygen or sulfur atom, one of  $R^8$ ,  $R^9$ , and  $R^{10}$  represents a group of formula (IV)



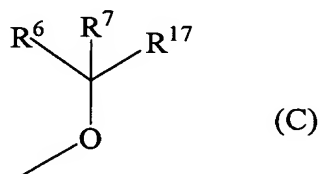
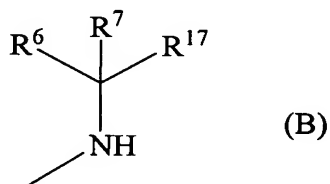
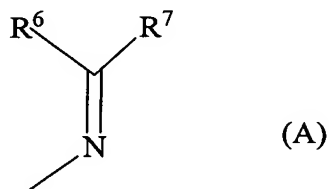
wherein Q, X1, and  $R^{13}$  are as defined in claim 31,

or a group of formula (V)



wherein X2, X3,  $R^{14}$ , and  $R^{15}$  are as defined in claim 31, and the others represent a hydrogen atom,

Z represents group (A), group (B), or group (C):



wherein

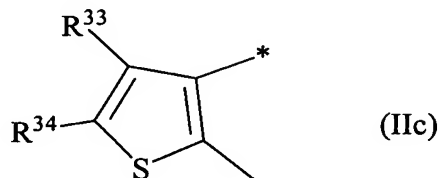
$R^6$  represents a hydrogen atom or  $\text{C}_{1-6}$  alkyl,

$R^7$  represents optionally substituted aryl, optionally substituted aryl  $\text{C}_{1-6}$  alkyl, optionally substituted aryl  $\text{C}_{2-6}$  alkenyl, or optionally substituted saturated or unsaturated five- or six-membered heterocyclic group, and



$R^{17}$  represents a hydrogen atom.

Claim 61 (Original): The compound according to claim 50, wherein A represents formula (IIc)



wherein

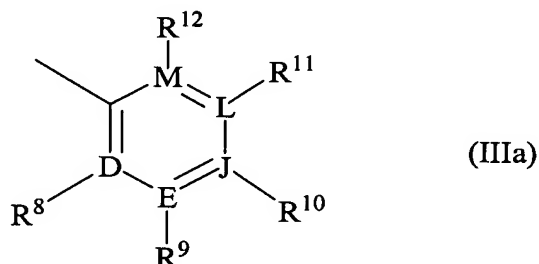
(i)  $R^{33}$  and  $R^{34}$  represent a hydrogen atom,

(ii) any one of  $R^{33}$  and  $R^{34}$  represents a hydrogen atom, and the other represents  $C_{1-6}$  alkyl optionally substituted by mono- or di- $C_{1-6}$  alkylamino, which may form cyclic amino, or a halogen atom, and the cyclic amino group may contain 1 to 3 heteroatoms,

(iii)  $R^{33}$  and  $R^{34}$ , which may be the same or different, represent  $C_{1-6}$  alkyl optionally substituted by mono- or di- $C_{1-6}$  alkylamino, which may form cyclic amino, or a halogen atom, and the cyclic amino group may contain 1 to 3 heteroatoms, or

(iv)  $R^{33}$  and  $R^{34}$  together with the carbon atoms to which they are respectively attached form an unsaturated five- to seven-membered carbocyclic ring,

$R^5$  represents formula (IIIa)



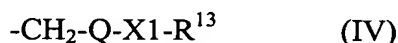
wherein

(i) D, E, J, L, and M represent a carbon atom, any one or two of  $R^8$ ,  $R^9$ ,  $R^{10}$ ,  $R^{11}$ , and  $R^{12}$ , which may be the same or different, represent a halogen atom; hydroxymethyl;  $C_{1-6}$  alkyl

optionally substituted by a halogen atom; or C<sub>1-6</sub> alkoxy optionally substituted by a halogen atom, and the others represent a hydrogen atom,

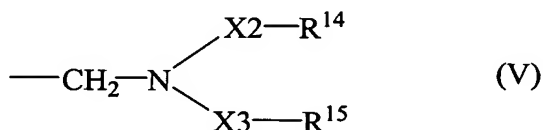
(ii) any one or two of D, E, J, L, and M represent a nitrogen atom, and the others represent a carbon atom, any one or two of R<sup>8</sup>, R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, and R<sup>12</sup> may be the same or different and represent a halogen atom; hydroxymethyl; C<sub>1-6</sub> alkyl optionally substituted by a halogen atom, or C<sub>1-6</sub> alkoxy optionally substituted by a halogen atom, and the others represent a hydrogen atom,

(iii) D, E, J, L, and M represent a carbon atom, R<sup>8</sup>, R<sup>9</sup>, and R<sup>12</sup> represent a hydrogen atom, any one of R<sup>10</sup> and R<sup>11</sup> represents a group of formula (IV)



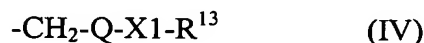
wherein Q, X1, and R<sup>13</sup> are as defined in claim 31,

or a group of formula (V)

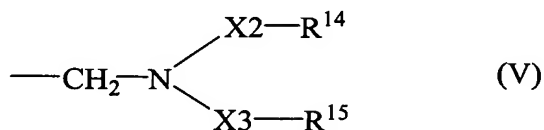


wherein X2, X3, R<sup>14</sup>, and R<sup>15</sup> are as defined in claim 31, and the other represents a hydrogen atom,

(iv) any one or two of D, E, J, L, and M represent a nitrogen atom, and the others represent a carbon atom, R<sup>8</sup>, R<sup>9</sup>, and R<sup>12</sup> represent a hydrogen atom, and one of R<sup>10</sup> and R<sup>11</sup> represents a group of formula (IV)

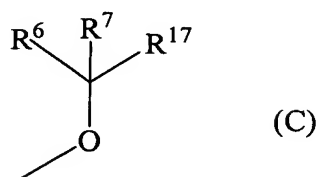
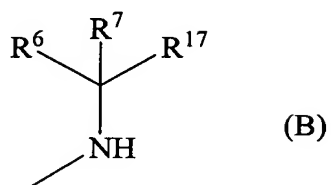
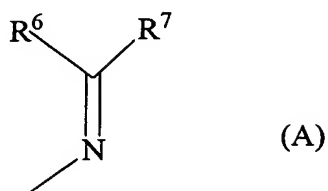


wherein Q, X1, and R<sup>13</sup> are as defined in claim 31, or a group of formula (V)



wherein X2, X3, R<sup>14</sup>, and R<sup>15</sup> are as defined in claim 31, and the other represents a hydrogen atom,

Z represents group (A), group (B), or group (C):



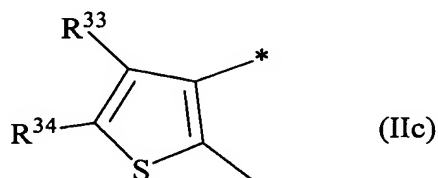
wherein

$R^8$  represents a hydrogen atom or  $C_{1-6}$  alkyl,

$R^7$  represents optionally substituted aryl, optionally substituted aryl  $C_{1-6}$  alkyl, optionally substituted aryl  $C_{2-6}$  alkenyl, or optionally substituted saturated or unsaturated five- or six-membered heterocyclic group, and

$R^{17}$  represents a hydrogen atom.

Claim 62 (Original): The compound according to claim 50, wherein A represents formula (IIc)



wherein

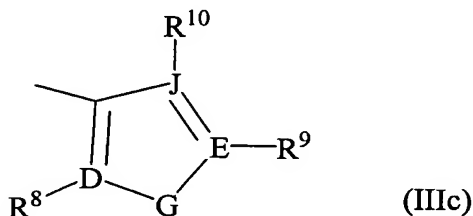
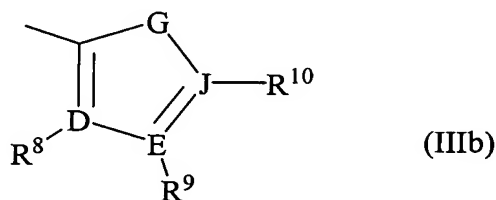
(i)  $R^{33}$  and  $R^{34}$  represent a hydrogen atom,

(ii) any one of  $R^{33}$  and  $R^{34}$  represents a hydrogen atom, and the other represents  $C_{1-6}$  alkyl optionally substituted by mono- or di- $C_{1-6}$  alkylamino, which may form cyclic amino, or a halogen atom, and the cyclic amino group may contain 1 to 3 heteroatoms,

(iii)  $R^{33}$  and  $R^{34}$ , which may be the same or different, represent  $C_{1-6}$  alkyl optionally substituted by mono- or di- $C_{1-6}$  alkylamino, which may form cyclic amino, or a halogen atom, and the cyclic amino group may contain 1 to 3 heteroatoms, or

(iv)  $R^{33}$  and  $R^{34}$  together with the carbon atoms to which they are respectively attached form an unsaturated five- to seven-membered carbocyclic ring,

$R^5$  represents formula (IIIb) or formula (IIIc)



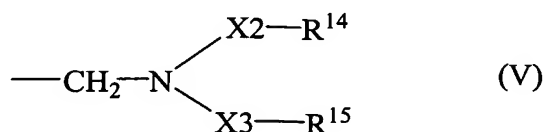
wherein

(i) D, E, and J represent a carbon atom, G represents an oxygen or sulfur atom, any one or two of  $R^8$ ,  $R^9$ , and  $R^{10}$ , which may be the same or different, represent a halogen atom; hydroxymethyl;  $C_{1-6}$  alkyl optionally substituted by a halogen atom; or  $C_{1-6}$  alkoxy optionally substituted by a halogen atom, and the others represent a hydrogen atom, or

(ii) D, E, and J represent a carbon atom, G represents an oxygen or sulfur atom, one of  $R^8$ ,  $R^9$ , and  $R^{10}$  represents a group of formula (IV)

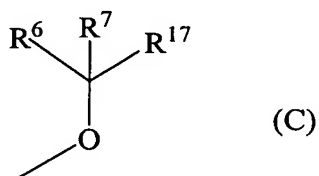
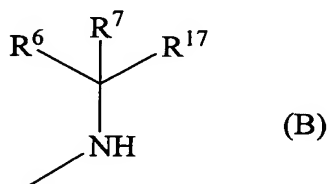
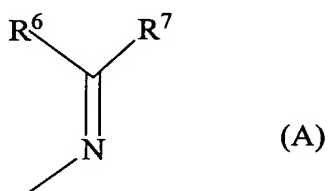


wherein Q, X<sup>1</sup>, and R<sup>13</sup> are as defined in claim 31, or a group of formula (V)



wherein X<sup>2</sup>, X<sup>3</sup>, R<sup>14</sup>, and R<sup>15</sup> are as defined in claim 31, and the others represent a hydrogen atom,

Z represents group (A), group (B), or group (C):



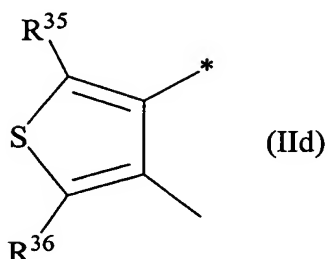
wherein

R<sup>6</sup> represents a hydrogen atom or C<sub>1-6</sub> alkyl,

R<sup>7</sup> represents optionally substituted aryl, optionally substituted aryl C<sub>1-6</sub> alkyl, optionally substituted aryl C<sub>2-6</sub> alkenyl, or optionally substituted saturated or unsaturated five- or six-membered heterocyclic group, and

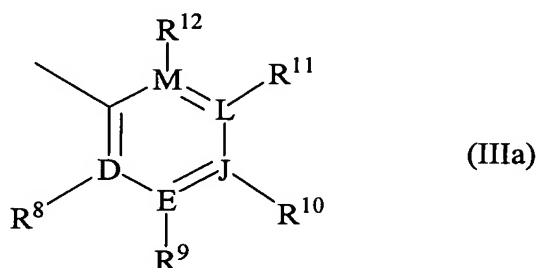
R<sup>17</sup> represents a hydrogen atom.

Claim 63 (Original): The compound according to claim 50, wherein A represents formula (IIId)



wherein R<sup>35</sup> and R<sup>36</sup> represent a hydrogen atom, or any one of R<sup>35</sup> and R<sup>36</sup> represents a hydrogen atom with the other representing C<sub>1-6</sub> alkyl optionally substituted by a halogen atom,

R<sup>5</sup> represents formula (IIIa)

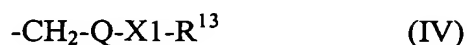


wherein

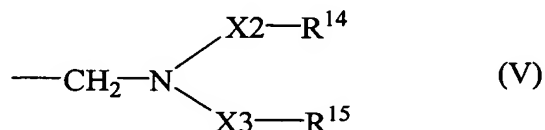
(i) D, E, J, L, and M represent a carbon atom, any one or two of R<sup>8</sup>, R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, and R<sup>12</sup>, which may be the same or different, represent a halogen atom; hydroxymethyl; C<sub>1-6</sub> alkyl optionally substituted by a halogen atom; or C<sub>1-6</sub> alkoxy optionally substituted by a halogen atom, and the others represent a hydrogen atom,

(ii) any one or two of D, E, J, L, and M represent a nitrogen atom, and the others represent a carbon atom, any one or two of R<sup>8</sup>, R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, and R<sup>12</sup> may be the same or different and represent a halogen atom; hydroxymethyl; C<sub>1-6</sub> alkyl optionally substituted by a halogen atom, or C<sub>1-6</sub> alkoxy optionally substituted by a halogen atom, and the others represent a hydrogen atom,

(iii) D, E, J, L, and M represent a carbon atom,  $R^8$ ,  $R^9$ , and  $R^{12}$  represent a hydrogen atom, any one of  $R^{10}$  and  $R^{11}$  represents a group of formula

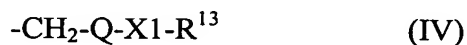


wherein Q, X1, and  $R^{13}$  are as defined in claim 31, or a group of formula (V)

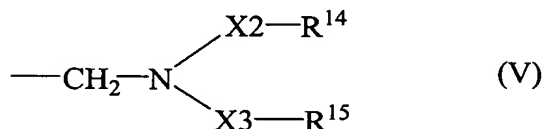


wherein X2, X3,  $R^{14}$ , and  $R^{15}$  are as defined in claim 31, and the other represents a hydrogen atom, or

(iv) any one or two of D, E, J, L, and M represent a nitrogen atom, and the others represent a carbon atom,  $R^8$ ,  $R^9$ , and  $R^{12}$  represent a hydrogen atom, and one of  $R^{10}$  and  $R^{11}$  represents a group of formula (IV)

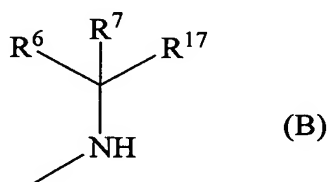
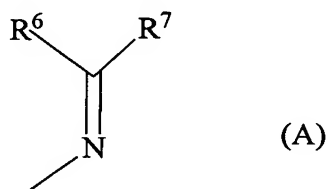


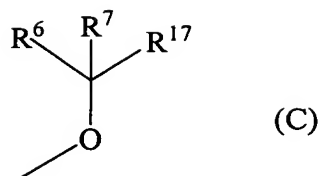
wherein Q, X1, and  $R^{13}$  are as defined in claim 31, or a group of formula (V)



wherein X2, X3,  $R^{14}$ , and  $R^{15}$  are as defined in claim 31, and the other represents a hydrogen atom,

Z represents group (A), group (B), or group (C):





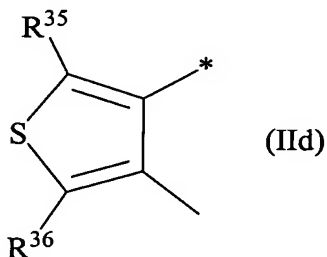
wherein

$R^6$  represents a hydrogen atom or  $C_{1-6}$  alkyl,

$R^7$  represents optionally substituted aryl, optionally substituted aryl  $C_{1-6}$  alkyl, optionally substituted aryl  $C_{2-6}$  alkenyl, or optionally substituted saturated or unsaturated five- or six-membered heterocyclic group, and

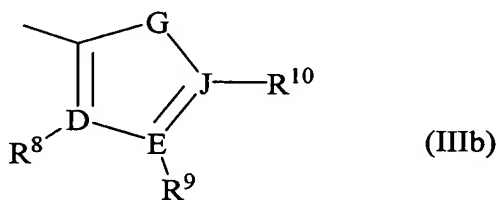
$R^{17}$  represents a hydrogen atom.

Claim 64 (Original): The compound according to claim 50, wherein A represents formula (IIId)

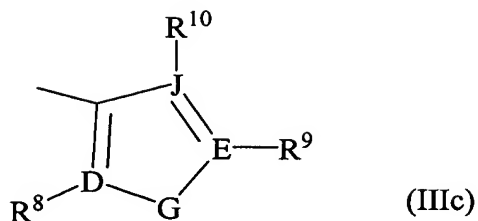


wherein  $R^{35}$  and  $R^{36}$  represent a hydrogen atom, or any one of  $R^{35}$  and  $R^{36}$  represents a hydrogen atom with the other representing  $C_{1-6}$  alkyl optionally substituted by a halogen atom,

$R^5$  represents formula (IIIb) or formula (IIIc)



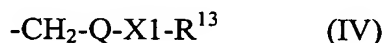




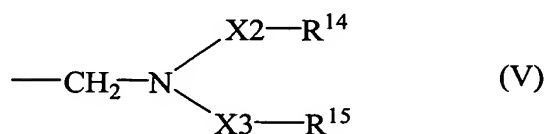
wherein

(i) D, E, and J represent a carbon atom, G represents an oxygen or sulfur atom, any one or two of  $R^8$ ,  $R^9$ , and  $R^{10}$ , which may be the same or different, represent a halogen atom; hydroxymethyl;  $C_{1-6}$  alkyl optionally substituted by a halogen atom; or  $C_{1-6}$  alkoxy optionally substituted by a halogen atom, and the others represent a hydrogen atom,

(ii) D, E, and J represent a carbon atom, G represents an oxygen or sulfur atom, one of  $R^6$ ,  $R^9$ , and  $R^{10}$  represents a group of formula (IV)

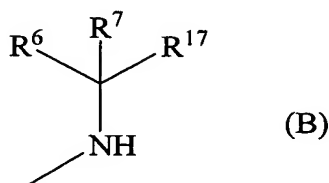
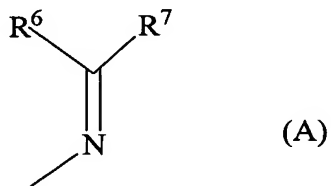


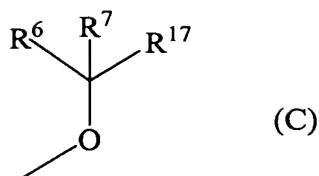
wherein Q, X1, and  $R^{13}$  are as defined in claim 31, or a group of formula (V)



wherein X2, X3,  $R^{14}$ , and  $R^{15}$  are as defined in claim 31, and the others represent a hydrogen atom,

Z represents group (A), group (B), or group (C):





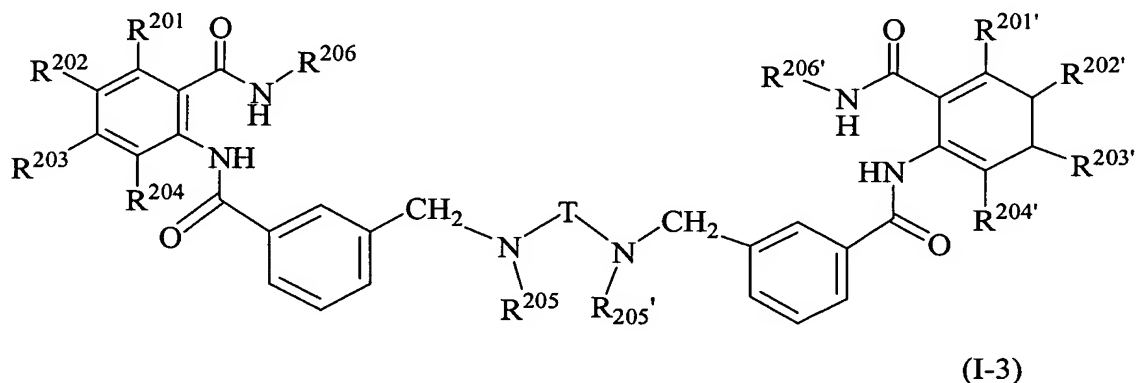
wherein

$R^6$  represents a hydrogen atom or  $C_{1-6}$  alkyl,

$R^7$  represents optionally substituted aryl, optionally substituted aryl  $C_{1-6}$  alkyl, optionally substituted aryl  $C_{2-6}$  alkenyl, or optionally substituted saturated or unsaturated five- or six-membered heterocyclic group, and

$R^{17}$  represents a hydrogen atom.

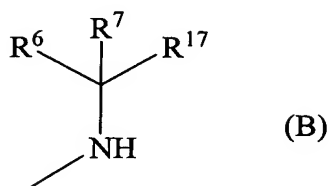
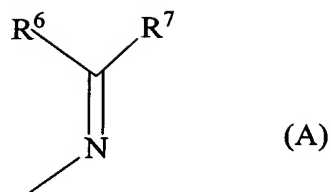
Claim 65 (Original): A compound represented by formula (I-3) or a pharmaceutically acceptable salt or solvate thereof:



wherein  $R^{201}$ ,  $R^{202}$ ,  $R^{203}$ ,  $R^{204}$ ,  $R^{201'}$ ,  $R^{202'}$ ,  $R^{203'}$  and  $R^{204'}$ , which may be the same or different, represent a hydrogen atom, a halogen atom, hydroxyl,  $C_{1-6}$  alkyl, or  $C_{1-6}$  alkoxy,

$R^{205}$  and  $R^{205'}$ , which may be the same or different, represent a hydrogen atom or  $C_{1-6}$  alkyl,

$R^{206}$  and  $R^{206'}$ , which may be the same or different, represent group A or group B



wherein R<sup>6</sup> represents a hydrogen atom or C<sub>1-6</sub> alkyl, R<sup>7</sup> represents aryl or a saturated or unsaturated five- or six-membered heterocyclic group in which the aryl group and heterocyclic group are optionally substituted by a halogen atom or C<sub>1-6</sub> alkyl optionally substituted by a halogen atom, and

T represents C<sub>2-8</sub> alkylene chain.

Claim 66 (Currently Amended): A pharmaceutical composition comprising as an active ingredient a compound according to ~~any one of claims 1-65~~ claim 1 or a pharmaceutically acceptable salt or solvate thereof.

Claims 67-86 (Canceled).

Claim 87 (Currently Amended): A method for preventing or treating a disease for which serum phosphorus lowering action or phosphate transport inhibition is therapeutically effective, said method comprising the step of administering a therapeutically or prophylactically effective amount of a compound according to ~~any one of claims 1 to 65~~ claim 1 or a pharmaceutically acceptable salt or solvate thereof to a mammal.

Claim 88 (Original): The method according to claim 87, wherein the disease for which serum phosphorus lowering action or phosphate transport inhibition is therapeutically or prophylactically effective is hyperphosphatemia.

Claim 89 (Original): The method according to claim 87, wherein the disease for which serum phosphorus lowering action or phosphate transport inhibition is therapeutically or prophylactically effective is renal failure or chronic renal failure.

Claim 90 (Original): The method according to claim 87, wherein the diseases for which serum phosphorus lowering action or phosphate transport inhibition is therapeutically or prophylactically effective are secondary hyperparathyroidism and primary hyperparathyroidism and diseases related thereto.

Claim 91 (Original): The method according to claim 90, wherein the secondary hyperparathyroidism-related disease is renal osteodystrophy, central or peripheral nervous system damage induced by PTH increase or vitamin D lowering, anemia, myocardiopathy, hyperlipidemia, anomaly of saccharometabolism, pruritus cutaneus, tendon rupture, sexual dysfunction, muscle damage, skin ischemic ulcer, growth retardation, heart conduction disturbance, pulmonary diffusing impairment, immune deficiency, ostealgia and arthralgia, bone deformity, or fracture.

Claim 92 (Original): The method according to claim 87, wherein the disease for which serum phosphorus lowering action or phosphate transport inhibition is therapeutically or prophylactically effective is calcium/phosphorus metabolic disorder, for example, metabolic osteopathy.

Claim 93 (Original): The method according to claim 87, wherein the disease for which serum phosphorus lowering action or phosphate transport inhibition is therapeutically or prophylactically effective is a disease for which the suppression of calcium and/or phosphorus product is therapeutically effective.

Claim 94 (Original): The method according to claim 93, wherein the disease for which the suppression of calcium and/or phosphorus product is therapeutically effective is calcification of cardiovascular system in dialysis patients, age-related arterial sclerosis, diabetic vasculopathy, calcification of soft tissue, metastatic calcification, ectopic calcification, red eye, arthralgia, myalgia, pruritus cutaneus, heart conduction disturbance, pulmonary diffusing impairment, angina pectoris, cardiac infarction, or heart failure induced by cardiac murmur or valvular disease.

Claim 95 (Currently Amended): A method for lowering the concentration of serum phosphorus in a blood stream, said method comprising the step of administering a therapeutically or prophylactically effective amount of a compound according to ~~any one of claims 1 to 65~~ claim 1 or a pharmaceutically acceptable salt or solvate thereof to a mammal.

Claim 96 (Currently Amended): A method for inhibiting phosphate transport in vivo, said method comprising the step of administering a therapeutically or prophylactically effective amount of a compound according to ~~any one of claims 1 to 65~~ claim 1 or a pharmaceutically acceptable salt or solvate thereof to a mammal.